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# THESIS

**SETTLEMENT PATTERNS AND THE INTENSITY OF VIOLENCE IN ETHNIC CONFLICTS**

by

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From the Second World War to the present, ethnic civil wars have continued to be a frequent and widespread phenomenon. Most of the existing literature on civil wars in general and ethnic conflict in particular is concerned with explaining onset of conflict, leaving the question of different intensity of violence under-researched. This thesis attempts to fill this gap by examining the link between structural conditions of ethnic conflicts and their violent outcomes. Specifically, it is argued that settlement patterns of conflicting ethnic groups may have explanatory power regarding different intensity of violence in conflict. Once distinct ethnic groups engage in conflict, their patterns of settlement present a strategic challenge for the warring parties. First, the more intermixed are the opponents' population bases, the harder it becomes to protect own population and the easier target opponent's population becomes. Second, interspersed ethnic groups are likely to produce abundance of small, disconnected and loosely organized militant units, which are virtually impossible to effectively manage and command, and subsequently control damage. The proposed hypotheses are tested using geospatial data on ethnic settlement patterns and through case studies. The evidence found during empirical analysis confirms that ethnic settlements have explanatory power regarding different intensity of inter-ethnic violence.

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**SETTLEMENT PATTERNS AND THE INTENSITY OF VIOLENCE IN ETHNIC CONFLICTS**

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# ABSTRACT

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# LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ANM | Atlas Narodov Mira |
| CHT | Chittagong Hill Tracts |
| CIESIN | Center for International Earth Science Information Network, Columbia University |
| CSCW | Centre for the Study of Civil War |
| EAC | Ethnic Armed Conflict dataset |
| ELF | Ethno-Linguistic Fractionalization index |
| EPR | Ethnic power Relations Project (dataset) |
| GDP | Gross Domestic Product |
| GeoEPR | Geo-referencing Ethnic Power Relations dataset |
| GPW | Gridded Population of the World dataset |
| GREG | Geo-Referencing Ethnic Groups dataset |
| ICRC | International Committee of the Red Cross |
| IDP | Internally Displaced Person |
| JNA | Yugoslavian national Army |
| PCJSS/SB | Chittagong Hill Tracts People's Coordination Association/Peace Force (Parbattya Chattagram Jana Sanghati Samiti/Shanti Bahini) |
| PRIO | International Peace Research Institute, Oslo |
| RQ | Reynal-Querol Index |
| SB | Shanti Bahini |
| SLA | The Sri Lankan Army |
| UCDP | Uppsala Conflict Data Program |
| UN | United Nations |

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# I. INTRODUCTION

From the Second World War to the present, ethnic civil wars have continued to be a frequent and widespread phenomenon. In his research, Fearon finds that among 128 civil wars that have occurred since 1945, 70 (55%) were carried out "by groups organized along ethnic lines" and 21 (17%) more cases were mixed or ambiguous.[1] According to Toft, "ethnic conflicts are the most prevalent form of armed conflict and are unlikely to abate in the short or long term. The number and intensity of ethnic conflicts across the globe directly and indirectly threaten the lives of millions."[2] In many cases, ethnic civil wars have been important forces of state-building, as societies united by powerful ethnic and national identities exercised their right to self-determination; but more often than not these conflicts have been major sources of local, regional and international instability.

Although war and conflict are among the most important research subjects for the political scientist, few try to explain the degrees of violence observed in civil conflicts. It is established that, due to certain factors, some countries may be more likely to experience civil wars. But conflict may be relatively minor in terms of inflicted damage, or, conversely, highly lethal. For example, Sambanis calculates that in 146 civil wars that occurred between 1945 and 1999, the mean number of estimated deaths was 143,883 and the median was 19,000, while in 11 conflicts the number of killed was estimated at fewer than 1,500.[3] However, most of the existing literature on civil wars and ethnic conflicts is only concerned with explaining the onset of conflict, leaving the question of the varying

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[1] James D. Fearon, "Why do some Civil Wars Last so Much Longer than Others?" *Journal of Peace Research* 41, no. 3 (2004): 288.

[2] Monica Duffy Toft, *The Geography of Ethnic Violence: Identity, Interests, and the Indivisibility of Territory* (Princeton, N.J: Princeton University Press, 2003), 3.

[3] Nicholas Sambanis, "What is Civil War? Conceptual and Empirical Complexities of an Operational Definition," *The Journal of Conflict Resolution* 48, no. 6 (2004): 814–858. As cited in Stathis N. Kalyvas, *The Logic of Violence in Civil War* (New York: Cambridge University Press, 2006), 54, note 4.

intensities of violence under-researched. As Lacina rightly argues, "the burgeoning literature on civil conflicts seldom considers why some civil wars are so much deadlier than others."[4]

This deficiency in the understanding of ethnic conflict may have serious implications for state policies and joint international efforts. The failure to adequately address the issues of potentially intense inter-ethnic violence may be extremely grave, as the conflicts in Rwanda, Sudan or former Yugoslavia demonstrate. Moreover, the issue of limited resources that the international community is able to allocate towards resolving security problems demands prioritization of efforts. Obviously, lethal conflicts that are potentially more dangerous deserve greater and earlier attention of peacekeeping efforts and peace-reestablishing missions. Therefore, there is a need to search for theoretically sound and empirically grounded explanations that would give policymakers some insight as to which wars are potentially more deadly, and how decision-makers can influence the situation to prevent lethal escalation.

This thesis will attempt to fill an existing gap by examining the link between structural conditions of ethnic conflicts and their violent outcomes. Why so some inter-ethnic conflicts result in significantly more violence than others? What are the factors that increase or decrease likely intensity of ethnic conflict? These highly important questions may have many answers, since ethnic conflict is by no means a simple phenomenon. In each case, different factors exist, including those endogenous to the conflict, which may explain the high or low levels of observed violence. Therefore, this thesis will not try to develop a comprehensive theory of ethnic war. Rather, it will contribute to the understanding of ethnic civil conflicts by analyzing the relationship between important structural factors—*settlement patterns—*and the varying intensities of violence in ethnic conflicts in an attempt to determine how the different settlement patterns of ethnic groups in conflicts may be a direct cause in the intensity of committed violence. Specifically, it is argued that once distinct ethnic groups engage in conflict, their patterns of settlement present a strategic challenge for the warring parties. The more

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[4] Bethany Lacina, "Explaining the Severity of Civil Wars," The Journal of Conflict Resolution 50, no. 2 (2006), 276.

ethnically intermixed the opponents are, the easier their population bases become targets. The abundance of small, poorly protected enclaves, easily attacked by independent or loosely controlled armed groups, makes it impossible to effectively control damage.

This hypothesis will be evaluated using several available datasets on civil wars from 1946 to 2008, and geo-coded data on ethnic settlement patterns. The primary source of information on the severity of the conflicts is the International Peace Research Institute Oslo's (PRIO) "Battle Deaths Dataset,"[5] which includes information on all of the armed conflicts that have reached the threshold of 25 battle-related deaths (both civilian and military) in any given year. Therefore, this dataset allows large variance of the dependent variable (intensity of conflict) by including minor hostilities as well as major wars.

The analysis will focus on civil wars where one or more conflicting parties mobilized support along ethnic lines. It is concerned only with instances of inter-ethnic relations that turned violent. The sample of ethnic groups for analysis will include only ethnicities that already participate in conflict due to the fact that this research is not interested in comparing instances of conflict with cases of peaceful coexistence. The analysis will be based on disaggregation of ethnic conflicts to the level of ethnic groups as primary actors. The ultimate goal of this analysis is to increase the understanding of ethnic war dynamics, in order to develop effective strategies for reducing intensity and avoiding the potential extensive human costs of ethnic wars.

Chapter II highlights conceptual problems regarding civil wars and other types of political violence, as well as discussing ethnicity and ethnic groups in conflict. Chapter III offers analysis of the available limited research that has been done thus far on the question of intensity of civil wars and ethnic conflicts and it reviews other existing approaches to the study of civil conflict in terms of their applicability for future use in dealing with the problem of severity and intensity of ethnic wars. Chapter IV of the thesis is devoted to outlining a tentative theoretic framework that incorporates the impact of settlement patterns on the intensity of ethnic conflicts. Chapter V uses available datasets to apply a proposed theoretic framework, and provides discussion of major findings.

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[5] Bethany Lacina and Nils Petter Gleditsch, "Monitoring Trends in Global Combat: A New Dataset of Battle Deaths," *European Journal of Population* 21, no. 2–3 (2005): 145.

Chapter VI includes four case studies that compare conflicts with lower intensity (Bangladesh Chittagong Hill Tracts and Slovenia) to civil wars with a higher intensity of fighting (Sri Lankan Tamils and Bosnia). The conclusion offers a summary of major findings and their implications for state policies that can resolve ethnic conflicts.

# II.   THE CONCEPT OF ETHNIC CONFLICT

The abundance of definitions for civil war, ethnic conflict, ethnicity, and other concepts relevant to this study requires that a special attempt be made to clarify their meanings. Such effort has practical utility, even if it is virtually impossible to find one agreed upon definition for any of these terms. The following discussion of definitions and conceptual problems will put the subject of this study—intensity of ethnic conflicts—into a broader theoretic context. Therefore, this chapter will not focus on resolving existing disputes and finding correct conceptual answers. Rather, it will bring to attention existing ambiguities and problems, and outline the conceptual basis of further analysis.

## A.   POLITICAL VIOLENCE AND CIVIL WAR

What is civil war? How is civil war different from other types of organized political violence? One of the most widely accepted definitions of civil war is given by Small and Singer, who explain it as "armed conflict that involves (a) military action internal to the metropole, (b) the active participation of the national government, and (c) effective resistance by both sides."[6]

The three identified dimensions—internality, government participation, and effective resistance—also guide Sambanis's operational definition of civil war, which is based on 11 precise criteria.[7] This criteria includes requirements such as 1) the war must occur in the territory of a recognized member of the international system, 2) the conflict is between politically and militarily organized parties with publicly stated political objectives, where government or its representative is a principal combatant, 3) the main insurgent organization generates at least some local support, and 4) a "weaker party is able to mount effective resistance."[8]

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[6]Melvin Small and J. David Singer, *Resort to Arms : International and Civil Wars, 1816–1980*, 2nd ed. (Beverly Hills, California: Sage Publications, 1982), 210.

[7] Nicholas Sambanis, "What is Civil War? Conceptual and Empirical Complexities of an Operational Definition," *The Journal of Conflict Resolution* 48, no. 6 (2004), 829.

[8] Ibid., 829.

Kalyvas argues for a broader definition, relaxing the requirement for government's direct participation in the conflict. He describes civil war as an "armed combat within the boundaries of a recognized sovereign entity between parties subject to a common authority at the outset of the hostilities."[9] While characteristics of the participating actors, as well as reasons why they fight, may vary significantly, civil wars are always "related to the effective breakdown of the monopoly of violence by way of armed internal challenge."[10] The place of civil war among other types of armed conflict is aptly illustrated in Small and Singer:[11]
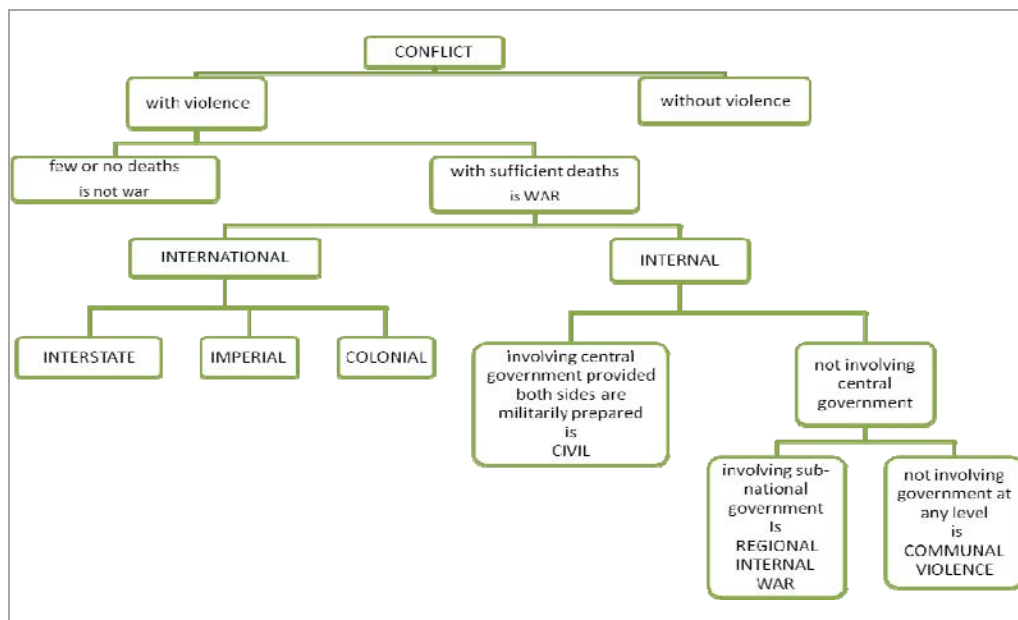


Figure 1.    Typology of War (After Small and Singer, 1982. *Resort to Arms: International and Civil Wars*, *1816–1980*)

This typology, however, does not clearly specify the difference between civil war and other forms of intrastate-level political and social violence. On this level, the civil war is a distinct phenomenon because of its degree of actors' organization and sophistication, effectiveness of violent resistance, and inherent challenge to sovereignty.

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[9] Stathis N. Kalyvas, *The Logic of Violence in Civil War* (New York: Cambridge University Press, 2006), 17.

[10] Ibid., 18.

[11] Small and Singer, *Resort to Arms: International and Civil Wars, 1816–1980*, 217.

Spontaneous violent protests and riots may have political causes and lead to a significant amount of damage, but they do not display a sufficient level of enduring organization. Genocides and politicides are often perpetuated by well-organized entities but lack effective resistance on behalf of the oppressed. Crime and inter-communal violence may involve effective resistance to authority and/or sophisticated social networks, but they lack political aims and a challenge to sovereignty.

In practice, however, it is often difficult to distinguish between different types of political violence. Civil wars may include genocidal episodes, or larger cases of genocide may contain minor instances of armed opposition. In many cases, complete, accurate and unbiased information about conflicts may be missing. The information may come from unreliable sources and be open to interpretation, since conflicting actors often describe the same events in different lights. As Kalyvas points out, insurgents seeking legitimacy portray themselves as revolutionaries, while incumbents tend to label insurgents as criminals or bandits: "The spillover effect of this semantic contest has affected research on the topic, as definitions of civil war have tended, until recently at least, to hinge on the war's outcome."[12]

Sambanis identifies several other problems in the same vein.[13] Civil wars are sometimes difficult to distinguish from anti-colonial conflicts, like the ongoing conflict between Russia and Chechens. In the situations of state collapse (e.g., Somalia since the 1990s), there is almost no such thing as a "sovereign government." Also, it is difficult to define the level of actors' organization sufficient for classification of the conflict as civil war. In addition, the intermittent and shifting character of hostilities makes it difficult to define the end of a war and the beginning of a new war, or single out episodes that belong to different types of political violence. Therefore, any reliable collection of information on civil wars will inevitably face the necessity for ad hoc decisions regarding coding ambiguous cases.

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[12] Kalyvas, *The Logic of Violence in Civil War*, 17.

[13] Sambanis, *What is Civil War? Conceptual and Empirical Complexities of an Operational Definition*, 816.

The Uppsala Conflict Data Program (UCDP) / Peace Research Institute of Oslo (PRIO) dataset, the major source of conflict intensity data used in this research, employs the terms "intrastate armed conflict" and "intrastate conflict with foreign involvement" synonymously to civil war. An armed conflict is:

> A contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in one calendar year. […] "Armed conflict" is also referred to as "state-based conflict," as opposed to "non-state conflict," in which none of the warring parties is a government.[14]

To ensure consistency, this research will rely on the operational definition of intrastate armed conflict used by the UCDP. The terms "armed conflict" and "civil war" are used interchangeably and have the same meaning, unless specified otherwise.

In this thesis, the major emphasis is put on the civil war as an *environment*. War is an outcome produced by participating actors and continuously maintained by actors' inputs. From this perspective, civil war is the result of decisions and actions of its participants. But it also becomes an environment, or a set of conditions, under which actors operate. From this second perspective, civil war affects the calculations, decisions, and actions of the actors, as well as the outcomes of these actions. For example, during the civil conflicts in the former country of Yugoslavia in the 1990s, ethnic-based militias were engaged in killing and looting, something unthought-of in peaceful times preceding the wars. As Kalyvas argues, "a civil war is likely to open a Pandora's box of violence."[15]

The notion of violence in civil war is by no means straightforward. In the broadest sense, violence may be any action or inaction that is considered unjust. In civil war, violence is both its attribute and result. As Small and Singer argue, it is impossible to conceive of war without violence. They consider the "violent taking of human life the primary and dominant characteristic of war."[16] In its physical expression during a civil

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[14] *UCDP/PRIO dataset*, http://www.pcr.uu.se/research/ucdp/definitions/ (accessed October 22, 2010).

[15] Kalyvas, *The Logic of Violence in Civil War*, 20.

[16] Small and Singer, *Resort to Arms : International and Civil Wars, 1816–1980*, 206.

war, violence includes killing or maiming people, damaging property, destroying infrastructures and the economy, and forcing populations to flee or take refuge to evade being killed or hurt.

Therefore, the most commonly used measure of violent impacts resulting from conflicts includes numbers of refugees and internally displaced persons, civilian casualties, and battle deaths.[17] The full-fledged test of the intensity of a civil war would have to include these three indicators, as well as additional data on economic, political, and social costs of the war.

This research, however, will be limited only to the numbers of battle related deaths in measuring conflict severity, despite the availability of some data on refugee flows and killed civilians. Available figures on refugees and internally displaced persons include data on a limited number of years (1980–1999),[18] which would significantly reduce the number of observations. Since numbers of civilians killed, apart from data on battle related deaths, include victims of genocides, politicides and other types of violence beyond the scope of this research, they cannot be directly included in the primary analysis of the impact of civil war. Therefore, the overall amount of violence observed in many conflicts may be actually greater than the figures reflected in the UCDP data. Perhaps, more comprehensive analysis will be possible when more complete data on other indicators becomes available.

It remains problematic to empirically separate the three forms of violence produced by civil war—battle deaths, civilian casualties, and refugee flows. Obviously, if all civilians were willing and able to flee the conflict zone, the amount of battle deaths and civilian casualties would be significantly lower or absent. At the same time, it is the greater amount of violence against peaceful populations that creates incentives to flee the

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[17] E. Melander, M. Öberg and J. Hall, "Are 'New Wars' More Atrocious? Battle Severity, Civilians Killed and Forced Migration before and After the End of the Cold War," *European Journal of International Relations* 15, no. 3 (Sep, 2009), 515–516.

[18] Ibid., 516.

conflict area, while lower casualty figures should be, in principle, associated with smaller refugee flows. Arguably, the relationship between the different types of violence in civil war deserves a separate and more substantial analysis.

> The definition of battle-related deaths employed here is also adopted from UCDP:
>
> > Counted as battle-related deaths is armed conflict behaviour between warring parties in a conflict dyad, be it state-based or non-state. In state-based conflicts the violence must be directly related to the incompatibility, i.e., carried out with the purpose of realizing the goal of the incompatibility and result in deaths. […] Typically, battle-related deaths occur in what can be described as "normal" warfare involving the armed forces of the warring parties. This includes traditional battlefield fighting, guerrilla activities (e.g. hit-and-run attacks / ambushes) and all kinds of bombardments of military units, cities and villages etc. The targets are usually the military itself and its installations, or state institutions and state representatives, but there is often substantial collateral damage in the form of civilians killed in crossfire, indiscriminate bombings etc. All deaths— military as well as civilian—incurred in such situations, are counted as battle-related deaths.[19]

What is conflict intensity and how can it be measured? Sislin and Pearson define intensity of conflict as the number of casualties divided over time.[20] Usually, annual measures are employed, but it is also plausible to use daily and monthly average figures derived from the entire number of battle-related deaths caused by conflict from its onset to its end. It is also feasible to divide overall losses of human lives by population figures or other demographic indicators. The analysis in this thesis is based on the aggregated battle deaths data per conflict divided by the overall duration of the war (in days). The measure of the intensity of fighting thus reflects the average daily casualty count for each conflict.

## B. ETHNICITY AND CONFLICT

Since the subject of this research concerns only "ethnic" civil wars, the relationship between ethnicity, nationalism and conflict deserves separate attention. There are different approaches and opinions as to the exact meaning of ethnicity, but

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[19] *UCDP/PRIO dataset*. http://www.pcr.uu.se/research/ucdp/definitions/ (accessed October 22, 2010).

[20] John Sislin and Frederic S. Pearson, *Arms and Ethnic Conflict.* (Lanham, MD: Rowman & Littlefield Publ., 2001): 93.

most tend to agree that "ethnicity has something to do with the *classification of people* and *group relationships*."[21] Ethnicity is the "consciousness of difference and the subjective salience of that difference."[22] Esman defines ethnic identity as "the set of meanings that individuals impute to their membership in an ethnic community, including those attributes that bind them to that collectivity and that distinguish it from others in their relevant environment."[23]

According to Horowitz, "Ethnic groups are defined by ascriptive differences, whether the indicum is color, appearance, language, religion, some other indicator of common origin, or some combination thereof."[24] Weber similarly emphasizes that ethnic groups are

> Those human groups that entertain a subjective belief in their common descent because of similarities of physical type or of customs or both, or because of memories of colonization and migration. This belief must be important for the propagation of group formation; it does not matter whether or not an objective blood relationship exists.[25]

Three major approaches—primordialist, instrumentalist, and constructivist—subsume existing explanations of the formation of ethnic identity.[26] While primordialism views ethnicity as a fixed category that emerges on top of objective differences between communities and kinship ties within communities, instrumentalism emphasizes the role of leaders in creating ethnicity. Ethnic identity then becomes an effective tool of

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[21] Thomas Hylland Eriksen, *Ethnicity and Nationalism : Anthropological Perspectives* (London ; Boulder, Colo: Pluto Press, 1993), 4.

[22] Jack David Eller, *From Culture to Ethnicity to Conflict : An Anthropological Perspective on International Ethnic Conflict* (Ann Arbor: University of Michigan Press, 1999), 9.

[23] Milton J. Esman, *Ethnic Politics* (Ithaca: Cornell University Press, 1994), 27.

[24] Donald L. Horowitz, *Ethnic Groups in Conflict* (Berkeley: University of California Press, 1985), 17.

[25] Max Weber, *Economy and Society; an Outline of Interpretive Sociology. Uniform Title: Wirtschaft Und Gesellschaft. English*. Edited by Guenther Roth and Claus Wittich (New York: Bedminster Press, 1968), 389.

[26] For comparative discussion of these approaches, see Ray Taras and Rajat Ganguly, *Understanding Ethnic Conflict : The International Dimension*, 2nd ed. (New York: Longman, 2002); similar classification with alternative names for approaches can be found in Thomas S. Szayna, *Identifying Potential Ethnic Conflict : Application of a Process Model* (Santa Monica: Rand, 2000), 17. An earlier but more extensive critique of existing theories can be found in Richard H. Thompson, *Theories of Ethnicity: A Critical Appraisal* (New York: Greenwood Press, 1989), 196.

mobilizing support and ensuring group cohesion, and subsequently solidifying the leader's position in the community. This thesis converges with the third approach that views ethnicity as a socially constructed category: the creation of ethnicity is not entirely guided by deliberate premeditated actions of elites in anticipation of personal benefits; the meaning of ethnic identity is invented and negotiated as a result of broader participation of community in *interactive* processes. Constructivism claims that "ethnicity is the product of a social process rather than a cultural given, made and remade rather than taken for granted, chosen depending on circumstances rather than ascribed through birth."[27]

Ethnicity is a *cognitive* phenomenon, since it is what people think of themselves and others. Ethnicity is *collective*, since it is meaningful only in connection with the group of people that share it and see themselves as distinct from others. Ethnicity is *heterogeneous*, because its "salience and depth […] will vary across groups and individuals."[28] Ethnicity is *relative*, because it did not exist before the emergence of modern nations.[29] As Szayna notes, "ethnicity as a phenomenon becomes real only because of the subjective constructions of individuals under certain circumstances and not because it exists *a priori* as some intrinsically permanent solidarity binding a set of individuals across time and space."[30] Benedict Anderson's argument regarding nationalism as the act of inventing nations and that those nations are just imagined communities[31] almost equally applies to ethnic identity as one of the major sources of national identity. Just like nations, ethnic groups imagine themselves to be free, to be a

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[27] Andreas Wimmer, "The Making and Unmaking of Ethnic Boundaries: A Multilevel Process Theory," *The American Journal of Sociology* 113, no. 4 (2008), 971.

[28] Bruce Gilley, "Review: Against the Concept of Ethnic Conflict," *Third World Quarterly* 25, no. 6 (2004), 1158.

[29] William Petersen, *Ethnicity Counts* (New Brunswick, N.J., U.S.A: Transaction Publishers, 1997), 32.

[30] Szayna, *Identifying Potential Ethnic Conflict : Application of a Process Model*, 26.

[31] Benedict Anderson, "Imagined Communities," in *Nations and Nationalism : A Reader*, eds. Philip Spencer and Howard Wollman (Edinburgh: Edinburgh University Press, 2005), 49.

community and to have boundaries. Yinger's typology (Table 1) illustrates how a different understanding of ethnic belonging by the group themselves and by outsiders shapes ethnic identities. [32]

Table 1.    Varieties of Ethnic Identity (From Yinger, 1994. *Ethnicity: Source of Strength? Source of Conflict?*)

| III. Do they participate in shared activities? | I. Are they perceived by others as ethnically distinct? | | | |
| | Yes | | No | |
| | II. Do individuals perceive themselves as ethnically distinct? | | Do individuals perceive themselves as ethnically distinct? | |
| | Yes | No | Yes | No |
| --- | --- | --- | --- | --- |
| Yes | 1. Full | 2. Unrecognized | 3. Private | 4. Hidden |
| No | 5. Symbolic | 6. Stereotyped | 7. Imagined | 8. Nonethnic |

Roosens, among others, points also to the *flexibility* of ethnic identification: "virtually anything that has not already been explicitly or publicly affirmed by members of other ethnic groups as ethnic emblems can, in principle, become an emblem of ethnicity for other groups."[33] This flexibility allows for the negotiation and re-negotiation of the exact meaning of people's identity,[34] in which outsiders may play as important of a role as insiders. For example, the 1903 census organized by the Ottoman Empire in today's Macedonia led to competition between Bulgaria, Greece and Serbia for forceful identification of the local population as belonging to corresponding ethnicities, often

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[32] J. Milton Yinger, *Ethnicity : Source of Strength? Source of Conflict?* (Albany: State University of New York Press, 1994), 4.

[33] Eugeen Roosens, *Creating Ethnicity : The Process of Ethnogenesis* (Newbury Park, Calif: Sage Publications, 1989), 18.

[34] Wimmer, *The Making and Unmaking of Ethnic Boundaries: A Multilevel Process Theory*, 970–1022.

contrary to the population's own desires.[35] Wimmer identifies four dimensions along which ethnic identities display variance: political salience of boundaries, social closure and "groupness," cultural differentiation, and degree of stability over time.[36]

The entrance of ethnic identity into the political realm marks its transition to ethno-nationalism.[37] Although national idea may also be based on a platform other than ethnicity (i.e.,, religious, civic, or multinational), ethno-nationalism has arguably become one of the major forces of state formation in modern history. Ethnic groups become ethnopolitical groups, meaning that their identity has "political consequences, resulting either in differential treatment of group members or in a political action on behalf of group interests."[38] As Wimmer, Cederman and Min emphasized,

> Ethnicity matters because the nation-state itself relies on ethnonational principles of political legitimacy: the state is ruled in the name of an ethnically defined people and rulers should therefore care for "their own people." As a result, ethnicity and nationhood have much greater political significance in nation-states than they do in other types of polities such as empires or city-states.[39]

This transition to ethno-nationalism is often accompanied with conflict and violence. The flexible and shifting character of ethnicity makes it vulnerable to political manipulations, as "political leaders can create stereotypes that give almost religious exaltedness to ethnic identity and, via stereotypes, lead to economic and cultural wars with other groups and

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[35] I. Yosmaoglu, "Counting Bodies, Shaping Souls: The 1903 Census and National Identity in Ottoman Macedonia," *International Journal of Middle East Studies* 38, no. 1 (Feb, 2006), 55.

[36] Wimmer, *The Making and Unmaking of Ethnic Boundaries: A Multilevel Process Theory*, 970–1022.

[37] Taras and Ganguly, *Understanding Ethnic Conflict : The International Dimension*, 7.

[38] Ted Robert Gurr, *Peoples Versus States : Minorities at Risk in the New Century* (Washington, D.C: United States Institute of Peace Press, 2000), 5.

[39] A. Wimmer, L. Cederman and B. Min, "Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set," *American Sociological Review* 74, no. 2 (Apr, 2009), 321.

even to genocide."[40] The making and remaking of ethnic boundaries often leads different groups to have conflicting claims of valuable resources: territory, population, political power, historic and cultural legacy, etc.

The concepts of ethnic conflict and ethnic violence are often used interchangeably by scholars. Generally, ethnic civil wars include violent armed conflicts where incompatibility concerns government and mobilization and/or victimization follows the division of society into ethnic groups. Brubaker and Laitin understand ethnic violence as

> Violence perpetrated across ethnic lines, in which at least one party is not a state (or representative of a state), and in which the putative ethnic difference is integral rather than incidental to that violence, that is in which the violence is meaningfully oriented in some way to the different ethnicity of the target.[41]

Similarly, Levinson understands ethnic conflict as the "violent conflict among groups who differ from one another in terms of culture, religion, physical features, or language."[42] Ethnic conflict may also be fought among several groups, or between factions of the same ethnicity.

Sambanis defines ethnic conflict as a "war among communities (ethnicities) that are in conflict over power relationship that exists between those communities and the state."[43] He also agrees with Kaufmann[44] that "opposing communities in ethnic civil

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[40] Roosens, *Creating Ethnicity : The Process of Ethnogenesis*, 18. The question then becomes, why people believe the provocative narratives of opportunistic politicians? Kalyvas makes a valuable point that the followers (local population, the perpetrators, collaborators, etc.) accept aggressive agendas and participate in violence because they see their own utility, like eliminating rivals, obtaining access to valuable local resources, etc. (Kalyvas, *The Logic of Violence in Civil War*).

[41] Rogers Brubaker and David D. Laitin, "Ethnic and Nationalist Violence," *Annual Review of Sociology* 24 (1998), 428.

[42] David Levinson, *Ethnic Relations : A Cross-Cultural Encyclopedia* (Santa Barbara, Calif: ABC-CLIO, 1994), 62.

[43] Nicholas Sambanis, "Do Ethnic and Nonethnic Civil Wars have the Same Causes?: A Theoretical and Empirical Inquiry (Part 1)," *The Journal of Conflict Resolution* 45, no. 3 (2001), 261.

[44] Chaim Kaufmann, "Possible and Impossible Solutions to Ethnic Civil Wars," *International Security* 20, no. 4 (1996), 138.

conflicts hold irreconcilable visions of the identity, borders, and citizenship of the state. They do not seek to control a state whose identity all sides accept, but rather to redefine or divide the state itself."[45]

To determine which civil wars are ethnic, this thesis follows the definition of Ethnic Armed Conflict Dataset (EAC), which posits that

> Ethnic/nonethnic conflicts are distinguished by the aims of the armed organizations and their recruitment and alliance structures. Ethnic wars typically involve conflicts over ethno-national self-determination, the ethnic balance of power in government, ethno-regional autonomy, ethnic and racial discrimination (whether alleged or real), and language and other cultural rights. […] Regarding recruitment and alliance structures, we define ethnic wars as those fought by armed organizations that recruit fighters predominantly among their own ethnic group and who forge alliances on the basis of ethnic affiliation. For a conflict to be classified as ethnic, armed organizations have to both explicitly pursue ethno-nationalist aims, motivations, and interests and recruit fighters and forge alliances on the basis of ethnic affiliations.[46]

Thus, as opposed to non-ethnic civil wars, in ethnic conflict, decisions regarding the choice of victims and the choice of allies largely coincide with ethnic group affiliation. First, militants believe and/or claim that they act on behalf of larger ethnic groups/communities. Therefore, their understanding of what the group exactly means, what is the challenge/threat for the group, etc. is important in shaping militants' actions. Second, the violence is perpetrated only "on the other side of ethnic border," since victimization occurs according to supposed ethnic group attachment.

A number of problems regarding ethnic group affiliation and ethnic conflict have important implications for this thesis. Many studies point to the difficulty of maintaining a clear distinction between ethnic and non-ethnic categories in the conflict environment. Political entrepreneurs pursuing personal goals may claim that they fight for their kin to

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[45] As cited in Sambanis, *Do Ethnic and Nonethnic Civil Wars have the Same Causes?: A Theoretical and Empirical Inquiry (Part 1)*, 261.

[46] Lars-Erik Cederman; Brian Min; Andreas Wimmer, "Ethnic Armed Conflict dataset," http://hdl.handle.net/1902.1/11797 (accessed 22 October, 2010); Wimmer, Cederman and Min, *Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set*, 316; L. Cederman, A. Wimmer and B. Min, "Why do Ethnic Groups Rebel? New Data and Analysis," *World Politics* 62, no. 1 (2010): 87.

increase legitimacy, sympathy and support for their struggle. For example, Tishkov argues that "because of the multi-ethnic composition of almost all major areas of the former Soviet Union [...], practically all kinds of conflicts and clashes—social or political [...]—easily acquire an ethnic manifestation and flavor."[47] However, before the collapse of  the Soviet Union when it was supportive (at least clandestinely) of communist revolutions abroad, many explicitly ethno-nationalist and separatist movements were led by Marxist/communist political movements, and could have been called leftist as much as nationalist.[48]

Also, ethnic groups in conflict are often viewed as whole cohesive communities, as unitary actors, or at least as having a high degree of connectivity between its members. But ethnicity may have a different meaning and salience across its membership, and different subgroups within ethnicity may pursue "hard-line" or "moderate" agendas with different implications for conflict dynamics. For example, in the Rwandan Hutu-Tutsi conflict, many moderate Hutu were killed along with Tutsi. Kalyvas identifies two mechanisms—identity shift and ethnic defection—through which ethnic lines may be crossed in conflict and members of one ethnic group may end up fighting each other.[49] Also, the factors leading to formation of ethnic identity or group allegiance are often endogenous to the conflict: the fact that co-ethnics fight for their shared cause influences in-group cohesion and salience of their group affiliation.[50]

So, can "ethnic" only conflicts be defined as situations where groups demonstrate a high degree of cohesion, or can this definition also include cases characterized by factional infighting within ethnic groups? At what point in time should the search begin for salient and cohesive ethnic identity—before, during, or immediately after the conflict, and why? These dilemmas suggest that the existing framework of ethnic conflict is not ideal. Ethnicity in ethnic conflict cannot be viewed as an absolute determinant of division

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[47] S. Kalyvas, "Ethnic Defection in Civil War," *Comparative Political Studies* 41, no. 8 (2008): 1043; Kumar Rupesinghe and Valerii Aleksandrovich Tishkov, *Ethnicity and Power in the Contemporary World* (New York: United Nations University Press, 1996), 38.

[48] Kurdish PKK and the Baloch national movement are two examples of this.

[49] Kalyvas, *Ethnic Defection in Civil War*, 1043.

[50] Kalyvas, *The Logic of Violence in Civil War*, 3.

between opponents, or as an absolute motivation for action. Still, if participants believe and accept this division, it may actually become self-fulfilling. And as long as the overwhelming majority of decisions and actions within a conflict are informed by ethnic factors, it is useful to analyze these conflicts within a separate category.

Conceptually, there is a lack of agreement as to how civil wars should be systematized. Some scholars divide them into coups, popular revolutions, and peripheral insurgencies,[51] or ethnic and non-ethnic conflicts,[52] however, it is also argued that the closer one looks at the civil wars, the harder it is to clearly distinguish them from other types of political violence due to the arbitrariness in definitions dealing with particular cases.[53]

Weidmann distinguishes two forms of ethnic civil wars: group versus group "symmetric" warfare under conditions of state failure or collapse and group vs state (including cases where state is closely associated with another group) "asymmetric" conflict under relatively strong state authority.[54] Levinson classifies the following types of conflict: separatism, irredentism, conquest, and the fight for political autonomy, power, control, or survival.[55]

Cederman, Wimmer, and Min distinguish four types of ethnic conflicts: "conflict over access to state power between the leaders of competing ethnic communities, secession from existing states in order to establish a new state ruled in the name of a

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[51] James D. Fearon, "Why do some Civil Wars Last so Much Longer than Others?," *Journal of Peace Research* 41, no. 3 (2004),:275–301.

[52] Sambanis, *Do Ethnic and Nonethnic Civil Wars have the Same Causes?: A Theoretical and Empirical Inquiry (Part 1)*, 259–282.

[53] For a detailed discussion of the problems of conceptualizing the civil wars, see Sambanis, *What is Civil War? Conceptual and Empirical Complexities of an Operational Definition*, 814–858.; Doug McAdam, Sidney G. Tarrow and Charles Tilly, *Dynamics of Contention* (New York: Cambridge University Press, 2001).

[54] To use Weidmann's term (Nils Benedikt Weidmann, "Critical Configurations: Settlement Patterns and Ethnic Violence" ETH), 141, http://e-collection.ethbib.ethz.ch/show?type=diss&nr=18257 (accessed September 28, 2010), which is also articulated in Kalyvas, *The Logic of Violence in Civil War,*.

[55] Levinson, *Ethnic Relations : A Cross-Cultural Encyclopedia*, 63–64.

particular ethnic group or to join another state controlled by ethnic kin, and competition between new states over mixed territories inhabited by members of their respective ethnic core groups."[56]

By definition, the focus of this thesis will be on asymmetric ethnic conflicts, where one side is represented by the state. In some instances, the government may be so weak that its capabilities are practically equal or even less than of its opponent, but even such states maintain the potential advantage of legitimate international aid. As a recognized member of the international community, they can request external assistance in dealing with ethnic insurgency, while most of the time ethnic rebels must generate support outside the legal mechanisms. Also, the analysis will primarily concentrate on secessionist conflicts and conflicts over access to state power, which arguably have become the prevailing forms of ethnic civil wars.

## C.     CONCLUSION

This thesis assumes that ethnicity is a socially constructed category, which varies in salience and meaning over time and space, and from one individual to another. The constructivist idea that individuals can cross the line between different ethnicities implicitly underscores that such lines exist. Ethnic war thus results not from "ancient hatreds," but rather from contemporary disagreement over power relations or claims to valuable assets, including territory, natural and human resources, history and cultural legacy.[57]

As for the analytic concept, ethnic civil war is far from being an ideal category. Still, despite its ambiguities, the distinction between ethnic and non-ethnic civil wars remains informative and valid, and therefore the primary analysis in the thesis will maintain this division. This study will largely adopt the definition of ethnic conflict maintained in the Ethnic Armed Conflict Dataset, and concentrate on ethnic civil war as a category of interethnic violence distinct from communal clashes and genocides. The

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[56] Cederman, Wimmer and Min, *Why do Ethnic Groups Rebel? New Data and Analysis*,  92.

[57] For example, there is an ongoing debate between Russian and Ukrainian scholars about whether famous classic writers Bulgakov and Gogol belong to Russian or Ukrainian cultural heritage.

major focus here is on ethnic civil war in a specific environment, which informs the actors' decisions in ways that are unique to this type of conflict. Recognizing the possible co-linearity of the different measures of severity of conflicts, the intensity of violence in ethnic civil wars will be measured by total and daily numbers of battle related deaths, according to the UCDP/PRIO definition.

# III.   LITERATURE OVERVIEW

This chapter offers an analysis of the limited available research that has been done so far on the question of the intensity of civil wars and ethnic conflicts. It also reviews other existing approaches to studying civil conflict in terms of these approaches' applicability for future use in dealing with the problems of severity and intensity of the ethnic wars. The ultimate goal of this analysis is to increase the understanding of ethnic war causes and dynamics, which would further allow for developing effective strategies for reducing intensity and avoiding the potentially extensive human costs of ethnic wars.

It is established that within the ongoing debate between proponents of opportunity and motivation mechanisms in explaining the incidence of civil wars, variables related to potential grievances (level of democracy, polarization, etc.) have generally more explanatory power regarding intensity of conflict than opportunity measures (including factors related to potential strength of state or rebels, proportion of mountainous terrain); however, too little research has been done to provide a definitive answer to this question. This chapter argues that among the wide range of frameworks that exist to explain ethnic wars, a relatively new study of the relationship between ethnic groups' settlement patterns and the *incidence* of ethnic conflict is one of the most promising approaches to developing a theoretic framework for explaining the varying *intensity* of these conflicts.

Based on the level of conceptual aggregation, the studies of civil wars and ethnic conflicts fall into one of three categories: quantitative research, disaggregated analyses, and qualitative case studies and anthropological accounts. Quantitative literature that operates on the macro-level using multi-variate statistics and regression analysis "has its own severe limitations imposed by data constraints and so should be seen as complementing qualitative in-country research rather than supplanting it."[58] Moreover, the overwhelming majority of quantitative literature is concerned with explaining the

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[58] Paul Collier, Anke Hoeffler and Dominic Rohner, "Beyond Greed and Grievance: Feasibility and Civil War," *Oxford Economic Papers* 61, no. 1 (2009): 2.

causes of outbreak, duration,[59] or cessation[60] of conflict, but not the difference in the scope of violence. The case studies and anthropological accounts may provide a wealth of information on particular conflicts, but, when dealing with unique details, they usually produce case-specific explanations that have to be treated with caution when applied to other cases. The disaggregated studies attempt to bring large-n studies to meso- and micro-levels, but they are rare because of a lack of complete and accurate information.

Any research concerning the onset of civil conflict that is applied to the question of conflict intensity has to be done with caution. As Kalyvas argues, it is wrong to use theories about the onset of conflict to explain the violence during and as a result of conflict. Kalyvas notes that "the causes of violence in civil war cannot be subsumed under the causes of civil war; hence a theory of civil wars cannot be a theory of violence in civil wars—and vice versa."[61] Lacina adds that "factors that make a country high risk for civil war may not have much predictive power for explaining variation in deaths among civil wars."[62]

Still, the existing literature does not have to be disregarded altogether. First, the way many scholars code the onset of conflict indicates that they may actually be analyzing severe conflicts against cases of no violence and low intensity violence. The threshold of 1000 battle related deaths per conflict, often employed to include the conflict in analysis,[63] may be rather high. Reaching this threshold may actually correlate with the

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[59] Fearon, *Why do some Civil Wars Last so Much Longer than Others?*, 275–301; Paul Collier, Anke Hoeffler and Måns Söderbom, "On the Duration of Civil War," *Journal of Peace Research* 41, no. 3 (2004): 253–273.

[60] Berenice A. Carroll, "How Wars End: An Analysis of some Current Hypotheses," *Journal of Peace Research* 6, no. 4,(1969): 295–321; Caroline A. Hartzell, "Explaining the Stability of Negotiated Settlements to Intrastate Wars," *The Journal of Conflict Resolution* 43, no. 1 (1999): 3–22; Nicholas Sambanis and Jonah Schulhofer-Wohl, "What's in a Line? Is Partition a Solution to Civil War?," *International Security* 34, no. 2 (2009): 82–118.

[61] Kalyvas, *The Logic of Violence in Civil War*, 20.

[62] Lacina, *Explaining the Severity of Civil Wars*, 280.

[63] For example, this number was used in the Correlates of War Project (http://www.correlatesofwar.org/), and in the following article: James D. Fearon and David D. Laitin, "Ethnicity, Insurgency, and Civil War," *The American Political Science Review* 97, no. 1 (2003): 75–90.

escalation in an ongoing conflict that has been present for years.[64] Second, the factors that are often associated with the conflict onset are not dichotomous. Therefore, the greater degree of a factor may be associated not only with the onset, but with the greater intensity of the conflict. For example, one may assume that the availability of external support not only instigates rebels to initiate violent strife, but it makes them more capable to inflict casualties on the opponent and, thus, the more violent the conflict becomes.

## A. OVERVIEW OF GENERAL LITERATURE ON CIVIL WARS AND ETHNIC CONFLICTS

As it has already been mentioned, the arguments made concerning the onset of civil war and ethnic conflict can be subsumed under two major categories—motivation and opportunity mechanisms. The first approach stresses that civil war is likely when grievances are severe enough (i.e., "ethnic or religious hatred, political repression, political exclusion, and economic inequality").[65] The second approach stemming from economic theory emphasizes the opportunity (or feasibility) of conflict, arguing that motives like greed are so common that any opportunity for profitable rebellion will be exploited by someone:[66] "grievance may favor rebellion by leading nonactive rebels to help in hiding the active rebels. But all the guerillas really need is superior local knowledge, which enables them to threaten reprisals for denunciation."[67]

Within the first tradition, a group of scholars argue that conflicts are more likely where there are deprived groups. They assert that democracy is negatively associated

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[64] There are many conceptual and practical challenges related to the coding of civil wars. For a detailed review of the problem, see Sambanis, *What is Civil War? Conceptual and Empirical Complexities of an Operational Definition*, 814–858.

[65] Paul Collier and Anke Hoeffler, "Greed and Grievance in Civil War," *Oxford Economic Papers* 56, no. 4 (2004): 570.

[66] Jack Hirshleifer, *The Dark Side of the Force: Economic Foundations of Conflict Theory* (New York: Cambridge University Press, 2001); Herschell I. Grossman, "A General Equilibrium Model of Insurrections," *The American Economic Review* 81, no. 4 (1991): 912–921; Collier and Hoeffler, *Greed and Grievance in Civil War*, 563–595.

[67] Fearon and Laitin, *Ethnicity, Insurgency, and Civil War*, 88.

with conflict,[68] while "high degrees of ethnic diversity contradict the assumption of cultural homogeneity on which modern nation-states are based, thus triggering waves of separatist wars and ethnic cleansings."[69] Under the motivation/grievances umbrella one can also include a vast array of arguments, from identity threat and "ancient hatreds"[70] to security and prisoners' dilemmas[71] to horizontal and regional economic inequalities[72] and "exclusion theory"[73]. The greater the deprivation or grievances, the more motivated an ethnic group should be to initiate conflict, suffer losses and inflict harm. Of course, these grievances have to be properly exploited by mobilizing social groups through framing.[74]

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[68] Ibrahim Elbadawi and Nicholas Sambanis, "How Much War Will We See? Explaining the Prevalence of Civil War," *The Journal of Conflict Resolution* 46, no. 3 (2002): 307–334; Sambanis, *Do Ethnic and Nonethnic Civil Wars have the Same Causes?: A Theoretical and Empirical Inquiry (Part 1)*, 259–282.

[69] As cited in Wimmer, Cederman and Min, *Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set*, 318.

[70] Marilynn B. Brewer, "Social Identity, Distinctiveness, and in-Group Homogeneity," *Social Cognition* 11, no. 1 (1993): 150; Marilynn B. Brewer and Wendi Gardner, "Who is this "we"? Levels of Collective Identity and Self Representations," *Journal of Personality and Social Psychology* 71, no. 1 (1996): 83; Clifford Geertz and University of Chicago Committee for the Comparative Study of New Nations, *Old Societies and New States the Quest for Modernity in Asia and Africa* (London: Collier-Macmillan, 1963).

[71] Brubaker and Laitin, *Ethnic and Nationalist Violence*, 423–452; Barry Posen, "The Security Dilemma in Ethnic Conflict," *Survival* 35, no. 1 (1993): 27–47; James D. Fearon and David D. Laitin, "Explaining Interethnic Cooperation," *The American Political Science Review* 90, no. 4 (1996): 715–735.

[72] José G. Montalvo and Marta Reynal-Querol, "Ethnic Polarization, Potential Conflict, and Civil Wars," *The American Economic Review* 95, no. 3 (2005): 796–816; Marta Reynal-Querol, "Ethnicity, Political Systems, and Civil Wars," *The Journal of Conflict Resolution* 46, no. 1 (2002): 29–54; R. Bhavnani and D. Miodownik, "Ethnic Polarization, Ethnic Salience, and Civil War," *The Journal of Conflict Resolution* 53, no. 1 (2009): 30; E. Forsberg, "Polarization and Ethnic Conflict in a Widened Strategic Setting," *Journal of Peace Research* 45, no. 2 (2008): 283; G. Østby, "Polarization, Horizontal Inequalities and Violent Civil Conflict," *Journal of Peace Research* 45, no. 2 (2008): 143.

[73] Andreas Wimmer, *Nationalist Exclusion and Ethnic Conflict: Shadows of Modernity* (New York: Cambridge University Press, 2002): 319; Wimmer, Cederman and Min, *Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set*, 316; Halvard Buhaug, Lars-Erik Cederman and Jan Ketil Rød, "Disaggregating Ethno-Nationalist Civil Wars: A Dyadic Test of Exclusion Theory," *International Organization* 62, no. 3 (2008): 531–551.

[74] For discussion of framing perspective, see Robert D. Benford and David A. Snow, "Framing Processes and Social Movements: An Overview and Assessment," *Annual Review of Sociology* 26 (2000): 611–639. See also, Murat Somer, "Cascades of Ethnic Polarization: Lessons from Yugoslavia," *Annals of the American Academy of Political and Social Science* 573 (2001): 127. For the discussion of the elite's influence in conflict, see Paul R. Brass, *Ethnicity and Nationalism: Theory and Comparison* (Newbury Park, CA: Sage Publications, 1991): 358; and V. P. Gagnon, Jr, "Ethnic Nationalism and International Conflict: The Case of Serbia," *International Security* 19, no. 3 (1994): 130–166.

By contrast, Fearon and Laitin argue that "the factors that explain which countries have been at risk for civil war are […] the conditions that favor the insurgency. These include poverty—which marks financially and bureaucratically weak states and also favors rebel recruitment—political instability, rough terrain, and large populations."[75]

Similarly, Collier and Hoeffler[76] emphasize opportunity, but do not reject the possibility that the opportunity can be used both by "greedy" and "aggrieved" rebels, "as long as perceived grievances are sufficiently widespread to be common across societies and time."[77] Their statistically significant predictors of conflict are 1) a share of primary commodity exports (provide opportunities for extortion and sustaining rebellion), 2) external support (Diasporas and hostile foreign governments as alternative sources of finance), 3) male secondary education enrollment, the gross domestic product (GDP) per capita and growth rate (as proxies for poverty which reduces costs for rebellion), and 4) dispersed population and mountainous terrain (as weakening government military capabilities). As factors that support both opportunity and motivation mechanism, they emphasize the size of a country's population and the "ethnic dominance" that occurs when one ethnic group consists of the majority in a country.[78]

In a recent study, Collier et al[79] attempted to find further confirmation of the "feasibility hypothesis," which argues that irrelevant of actual motivations of the rebels, "where the civil war is feasible, it will occur."[80] Using new refined data, they obtained additional support for this mechanism in newly tested factors (countries under the French security umbrella and a proportion of young men in the population), while previously introduced variables remained significant too (volume, growth and structure of income, proportion of terrain which is mountainous, and population size).[81] However, along with

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[75] Fearon and Laitin, *Ethnicity, Insurgency, and Civil War*, 75.

[76] Collier and Hoeffler, *Greed and Grievance in Civil War*, 563–595.

[77] Ibid., 589.

[78] Ibid., 588.

[79] Collier, Hoeffler and Rohner, *Beyond Greed and Grievance: Feasibility and Civil War*, 1–27.

[80] Ibid., 2.

[81] Ibid., 21–24.

the economic factors, two other variables were, in principle, interpreted as both pointing to opportunity and motivation: mountainous regions may be poor and indicate regional inequalities in distribution of welfare and many young males may be exploited by elders or present unemployment problem.[82]

How do these two concepts (motivation versus opportunity) operate in relation to battle severity? Unfortunately, very little work has been done to give a definite answer to this question. Lacina finds that variables related to potential grievances significantly outperform opportunity measures. Factors that are related to the potential strength of a state or rebels (military quality, GDP, and proportion of mountainous terrain), and thus proxy opportunity (feasibility), have no predictive power regarding the intensity of a conflict.[83]

Greater democracy is associated with significantly fewer battle deaths, which supports the motivation thesis.[84] It is suggested that democracy affects potential severity of fighting through public opinion, normative pressure, and institutional checks, which prevent the leaders from letting the conflict escalate too much. It also forces them to "grant concessions when faced with a severe insurgent threat."[85] Democracies may also be better equipped for negotiations, co-optation, or containment of rebels. "By contrast, in nondemocracies, challengers may assume that their best hope of achieving their goals is military victory or the collapse of the current regime and accordingly choose more deadly tactics."[86]

However, in line with the opportunity argument, it is established that "availability of foreign aid and intervention"[87] significantly increases the severity of war. This finding supports earlier research of Sislin and Pearson who also claim that arms acquisition by

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[82] Collier, Hoeffler and Rohner, *Beyond Greed and Grievance: Feasibility and Civil War*, 22.

[83] Lacina, *Explaining the Severity of Civil Wars*, 286.

[84] Ibid., 287.

[85] Ibid., 282.

[86] Ibid., 283.

[87] Ibid., 286.

ethnic groups tends to be correlated with more intense fighting: external arms supply and availability of arms to groups in conflict seem to lead to a greater intensity of fighting.[88]

Fearon and Laitin's ethnic and religious fractionalization index,[89] often used to proxy ethnic cleavages, poorly performed as a predictor for intensity of conflict.[90] Greater ethnic polarization (that is, if at least 8 percent of the population is an ethnic minority), but not *religious* polarization, is correlated with fewer battle deaths.[91] At the same time, both employed measures are argued not to capture the important dimensions of ethnic identity: "First, not all ethnic groups matter for politics. Second, ethnic conflicts are not the outcome of everyday encounters between individuals; they are the result of interactions between the state and ethnopolitical movements that challenge state authority."[92] Moreover, even from a strictly demographic perspective, "…contrary to expectations, the bulk of the quantitatively oriented literature fails to establish a clear association between ethnicity and civil war, even in wars that are commonly identified as 'ethnic' wars."[93] Another measure of ethnic cleavages has been suggested: the ethnic polarization, or Reynal-Querol (RQ), index, which increases as a society is divided

88 Lacina, Explaining the Severity of Civil Wars, 284.

89 Fearon and Laitin, Ethnicity, Insurgency, and Civil War, 75–90. The ethno-linguistic fractionalization index, or ELF, is based on data from Solomon Il'ich Bruk and others, Atlas Narodov Mira (Moskva: Glavnoe upravlenie geodezii i kartografii Gosudarstvennogo geologicheskogo komiteta SSSR: Institut etnografii i m. N.N. Miklukho-Maklaia Akademii Nauk SSSR, 1964). The same source was used to later construct the geo-coded "Geo-referencing Ethnic Groups" (GREG) dataset, which will be tested in this thesis.

90 Lacina, Explaining the Severity of Civil Wars, 282, note 18.

91 Ibid., 287.

92 Wimmer, Cederman and Min, Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set, 318. The authors also cite K. Chandra and S. Wilkinson, "Measuring the Effect of "Ethnicity,"" Comparative Political Studies 41, no. 4/5 (2008): 515; and Daniel N. Posner, "Measuring Ethnic Fractionalization in Africa," American Journal of Political Science 48, no. 4 (2004): 849. See also Lars-Erik Cederman and Luc Girardin, "Beyond Fractionalization: Mapping Ethnicity onto Nationalist Insurgencies," The American Political Science Review 101, no. 1 (2007): 173.

93 Bhavnani and Miodownik, Ethnic Polarization, Ethnic Salience, and Civil War, 33.

between fewer and larger distinct ethnic groups.[94] The RQ index is found to be a better predictor of civil conflict than the Ethno-linguistic fractionalization (ELF) index.[95]

The debate over the impact of ethnicity even in "ethnic" conflicts is an example of general problems with the quantitative approaches. It is argued that these studies "tend to overaggregate the dependent variable and treat ethnic conflicts as though they have uniform causes."[96] Kalyvas notes that "much work neglects the fact that there is no necessary overlap between the micro- and the macrolevels. The current emphasis on the macrolevel implies that "on-the-ground" dynamics are perceived as a rather irrelevant local manifestation of the macrolevel. Local actors are seen as local replicas of central actors."[97] As Kalyvas emphasizes,

> This neglect has several causes: a division of labor separating the tasks of collecting evidence at the microlevel and interpreting macrodynamics; an epistemic preference that marginalizes the particular; and the interpretation of microlevel dynamics in the language of the master cleavage. […] In other words, violence in an "ethnic" or "class war" is not an automatically or necessarily ethnic or class violence. This is not to say that ethnic, religious, or class allegiances are false or irrelevant, but, rather, that their effect varies considerably across time and space within the same civil war, and that their consolidation is often the outcome rather than the cause of violence.[98]

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[94] Montalvo and Reynal-Querol, *Ethnic Polarization, Potential Conflict, and Civil Wars*, 799; Reynal-Querol, *Ethnicity, Political Systems, and Civil Wars*, 29–54. The RQ index is different from the fractionalization index because the size of a group to which an individual belongs affects the value of the RQ index, while it is irrelevant in the fractionalization index.

[95] Montalvo and Reynal-Querol, *Ethnic Polarization, Potential Conflict, and Civil Wars*, 812. The impact of the RQ index on the intensity of violence cannot be tested here because the sample of civil wars is already limited to "ethnic" conflicts.

[96] Wimmer, Cederman and Min, *Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set*, 318.

[97] Kalyvas, *The Logic of Violence in Civil War*, 390.

[98] Ibid., 390.

Overall, this thesis agrees with Cederman, Girardin, and Gleditsch that "influential studies in the political-economy tradition have relied heavily on materialist interpretations of civil wars at the country level while downplaying specific interactions involving ethnic groups."[99]

## B.    DISAGGREGATED APPROACHES AND SPECIFIC LITERATURE ON ETHNIC SETTLEMENT PATTERNS

Recent disaggregated research attempts to address the above mentioned deficiencies of previous studies by testing hypotheses on incidence of civil wars using meso- and micro-level data related to the various aspects of conflicts. Instead of using country-level information, scholars collect and utilize actor-specific and event-specific data, with a focus on regional and local characteristics in social, political, economic, military, or geographic spheres. There are many increasingly successful attempts to employ geo-coded data, related to various types and locations of conflicts, separate violent events,[100] natural resources,[101] various characteristics of major actors,[102] etc., on civil wars.

Using a disaggregated approach to analyze power relations between ethnic groups, Wimmer, Cederman, and Min show that, contrary to the opportunity logic, ethnic identities have a significant impact on a group's political allegiance and its access to

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[99] L. Cederman, L. Girardin and K. Gleditsch, "Ethnonationalist Triads: Assessing the Influence of Kin Groups on Civil Wars," *World Politics* 61, no. 3 (2009): 403.

[100] Halvard Buhaug and Scott Gates, "The Geography of Civil War," *Journal of Peace Research* 39, no. 4 (2002): 417; H. Buhaug, L. Cederman and J. Rød, "Disaggregating Ethno-Nationalist Civil Wars: A Dyadic Test of Exclusion Theory," *International Organization* 62, no. 3 (2008): 531; Clionadh Raleigh, Andrew Linke, Havard Hegre and Joakim Karlsen, "Introducing ACLED-Armed Conflict Location and Event Data," *Journal of Peace Research* 47(5) 1–10; Håvard Hegre and others, *Population Size, Concentration, and Civil War: A Geographically Disaggregated Analysis* (Washington, D.C.: World Bank, 2007): 36.

[101] Elisabeth Gilmore and others, "Conflict Diamonds: A New Dataset," *Conflict Management and Peace Science* 22, no. 3 (2005): 257–272; Päivi Lujala, Jan Ketil Rod and Nadja Thieme, "Fighting Over Oil: Introducing a New Dataset," *Conflict Management and Peace Science* 24, no. 3 (2007): 239–256.

[102] Halvard Buhaug, Lars-Erik Cederman and Jan Ketil Rød, "Disaggregating Ethno-Nationalist Civil Wars: A Dyadic Test of Exclusion Theory," *International Organization* 62, no. 3 (2008): 531–551; A. Wimmer, L. Cederman and B. Min, "Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set," *American Sociological Review* 74, no. 2 (2009): 316.

power.[103] Following similar logic, Cederman, Weidmann and Gleditsch demonstrate the viability of a link between horizontal inequalities and ethnic conflict: "both advanced and backward ethnic groups are more likely to experience such conflicts than those groups whose wealth lies closer to the national average."[104] In the same vein, Buhaug, Cederman, and Rød confirm that "exclusion of powerful ethnic minorities increases the likelihood of conflict considerably.[105]

The above mentioned studies attempt to consolidate the motivation and opportunity mechanism within "exclusion theory," positing that "competition and exclusion concern control over the state and the public goods and services at its disposal. […] Ethnic politics simultaneously concerns material interests, such as access to government controlled jobs, services, and contracts; idealist motives such as the recognition of one's ethnic heritage by the state; and genuine political goals, such as access to state power."[106] Wimmer, Cederman, and Min claim that "previous research has examined primarily the relationship between individual inequality and conflict, and disregarded how the relationship between inequality and ethnic cleavages influence motivation and opportunities for collective action and mobilization."[107]

Thus, ethnic conflict becomes likely in three configurations: 1) when "the center of power becomes more ethnically segmented,"[108] 2) when large ethnic groups are excluded from power, and 3) "in incoherent states where the population is not accustomed to direct rule of the political center,"[109] leading to secessionist conflicts.

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[103] Wimmer, Cederman and Min, *Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set*, 316Ibid.; L. Cederman, A. Wimmer and B. Min, "Why do Ethnic Groups Rebel? New Data and Analysis," *World Politics* 62, no. 1 (2010): 87.

[104] Cederman, Lars-Erik, Gleditsch, Kristian Skrede and Weidmann, Nils, "Horizontal Inequalities and Ethno-Nationalist Civil War: A Global Comparison" (2010). APSA 2010 Annual Meeting Paper. http://ssrn.com/abstract=1641730 (accessed October 22, 2010), 3.

[105] Buhaug, Cederman and Rød, *Disaggregating Ethno-Nationalist Civil Wars: A Dyadic Test of Exclusion Theory*, 531.

[106] Wimmer, Cederman and Min, *Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set*, 324.

[107] Ibid., 531.

[108] Ibid., 334.

[109] Ibid., 334.

Later research complements this list with conditions that exclude ethnic groups who also face high risk of conflict when they have large kin groups in contiguous countries.[110]

Following opportunity logic, Toft uses the "Minorities at Risk" Project data[111] on settlement patterns of ethnic groups to argue that probability of civil war increases if "ethnic minority demands sovereignty over the territory it occupies, and the state sees this territory as indivisible from the rest of the state's territory."[112] Toft's conclusions are confirmed by Weidmann, Rød and Cederman,[113] who constructed a geocoded dataset of ethnic settlement patterns (the "Geo-Referencing of Ethnic Groups" (GREG) Project) based on maps from the Atlas Narodov Mira,[114] as well as in Weidmann's more detailed study[115] of ethnic settlement patterns. Weidmann's analysis showed that territorial concentration does not have statistical significance in explaining the conflict onset, while the concentration of ethnically kin population does correlate with a higher risk of conflict. As he states, "population dispersion receives a negative and significant coefficient, whereas territorial concentration has no effect."[116]

Why do groups comprised of fewer clusters face a smaller risk of conflict? Legitimacy of an ethnic group's claims and its capabilities to achieve its goals are directly influenced by the group's settlement patterns. Groups living as a concentrated majority face much greater risk of conflict than others. The groups that are the second most disposed to conflicts are the ones with concentrated minorities, while urban and

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[110] L. Cederman, L. Girardin and K. Gleditsch, "Ethnonationalist Triads: Assessing the Influence of Kin Groups on Civil Wars," *World Politics* 61, no. 3 (2009), 30.

[111] Minorities at Risk Project, "Minorities at Risk Dataset (2009)" College Park, MD: Center for International Development and Conflict Management, http://www.cidcm.umd.edu/mar/, (accessed September 27, 2010).

[112] Monica Duffy Toft, *The Geography of Ethnic Violence: Identity, Interests, and the Indivisibility of Territory* (Princeton, NJ: Princeton University Press, 2003): 18.

[113] Nils B. Weidmann, Jan Ketil Rød and Lars-Erik Cederman, "Representing Ethnic Groups in Space: A New Dataset," *Journal of Peace Research* 47, no. 4 (2010): 491–499.

[114] Solomon Il'ich Bruk and others, *Atlas Narodov Mira* (Moskva: Glavnoe upravlenie geodezii i kartografii Gosudarstvennogo geologicheskogo komiteta SSSR: Institut etnografii i m. N.N. Miklukho-Maklaia Akademii Nauk SSSR, 1964).

[115] Nils Benedikt Weidmann, "Critical Configurations: Settlement Patterns and Ethnic Violence," ETH, 141.

[116] Ibid., 68.

dispersed groups are the least risk-prone. The above mentioned research attempts to demonstrate that an ethnic group can only make legitimate claims to well-defined territory with clearly demarcated boundaries: "the escalation of violence up to the level of ethnic war can occur only if there is mass support in the group population for conflict. However, for mass mobilization to be possible, the group population must believe that the cause for fighting is justified. This condition is more likely to hold for concentrated groups."[117] Thus, territorial concentration increases a group's *motivations*. Population concentration, on the other hand, leads to greater intra-group interaction and cohesion, and increases a group's *capabilities* for mobilization by facilitating coordination of collective actions, containing dissent, and reducing organizational costs.[118]

Both Toft[119] and Weidmann[120] maintain that ethnic settlement patterns should be part of any explanation of ethnic conflict. Although Toft only argues that territory "informs the motives of actors," and "… helps us to better understand the *emergence* of violence"[121] (emphasis added), territorial distribution of a population may have an equally important, but not analogous, effect on the *intensity* of conflict.

The previous findings have to be carefully re-examined regarding the varying intensities of ethnic wars because structural conditions like settlement patterns may have a different affect on war dynamics than on pre-conflict dynamics. As Kalyvas emphasizes, war and peace are very different settings,[122] and an initial outbreak of violent contention does not always tell us how violent the episode will be. For example, in Toft's analysis, many of the cases where *significant* violence had been recorded were either not included in the analysis or were outliers.[123] Many cases that indicated high rebel activity

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[117] Weidmann, *Critical Configurations: Settlement Patterns and Ethnic Violence*, 60.

[118] Ibid., 61.

[119] Toft, *The Geography of Ethnic Violence : Identity, Interests, and the Indivisibility of Territory*, 226.

[120] Weidmann, *Critical Configurations: Settlement Patterns and Ethnic Violence*, 141.

[121] Toft, *The Geography of Ethnic Violence : Identity, Interests, and the Indivisibility of Territory*, 10.

[122] Stathis N. Kalyvas, *The Logic of Violence in Civil War* (New York: Cambridge University Press, 2006), 485.

[123] Toft, *The Geography of Ethnic Violence : Identity, Interests, and the Indivisibility of Territory*, 36.

were missing observations on settlement patterns and thus were dropped. These include the following: Bosnia and Croats and Serbs; Croatia and Serbs; Afghanistan and Hazaras, Pashtuns and Uzbeks; Angola and Ovimbundu; Burma and Mons; India and Bodos; Iraq and Shi'is; Lebanon and Palestinians; Niger and Tuareg; Philippines and Igorots; Somalia and Issaq; Togo and Ewe; Uganda and Acholi. Several other instances indicated dispersed groups with high rebel activity: Hutus in Burundi, Sunnis in Lebanon, and Tutsis in Rwanda. There were many cases listed in Appendix 2[124] that indicated groups with concentrated settlement patterns who experienced no rebellion (i.e., Crimean Russians, Hungarians in Yugoslavia, Alawi in Syria, Zulus and Coloreds in South Africa, Yakuts, Tuvinians and Tatars in Russia, Yoruba, Ogani and Ibo in Nigeria, Basters in Namibia, Luhya in Kenya, and many others).

Contrary to Weidmann's finding that the onset of conflict is associated with concentrated ethnic groups, Toft demonstrates that the location of most of the violence in the Bosnian civil war was in ethnically diverse areas: "Locations with a high level of ethnic contestation tend to see more confrontations between armed forces as groups struggle for control of a unit, but these locations are also more susceptible to one-sided violence against civilians."[125] Although initial mobilization and escalation of ethnic conflict might have taken place in more ethnically homogeneous locales, the areas that saw more violence were not characterized by ethnic homogeneity or centralization. On the contrary, most violence occurred in areas of ethnic cohabitation and intermingling.

## C.    CONCLUSION

Apparently, the existing cacophony of approaches and arguments hinges on precise and comprehensive data collection and interpretation. The deficit of accurate information on the civil wars and ethnic conflicts will continue to affect the credibility of research results. Most of the existing research has focused on important, but general, questions regarding the onset of ethnic war, leaving the question of conflict intensity

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[124] Toft, *The Geography of Ethnic Violence : Identity, Interests, and the Indivisibility of Territory*, Appendix 2, 153.

[125] Weidmann, *Critical Configurations: Settlement Patterns and Ethnic Violence*, 141.

under-researched. Despite these deficiencies, the disaggregated approach is better suited to answer specific questions about civil wars and ethnic conflicts because it attempts to capture case-specific characteristics and employ more fine-grained data analysis. One such pending question is why are some ethnic conflicts much deadlier than others.

# IV.   THEORETIC FRAMEWORK

In the previous chapter, the existing approaches to explaining civil wars and ethnic conflicts were examined. As it has become apparent, there is large gap in the literature regarding explanations for the varying intensity of violence in ethnic civil wars. The potential factors that increase conflict severity include Diasporas and the availability of external support, including arms supplies, state weakness, rough terrain, population density. Other demographic factors were also linked to an increase in conflict severity: degrees of polarization, horizontal inequality and exclusion from political power, and territorial concentration and population concentration of ethnic groups. However, most of the documented are related to the pre-conflict dynamics. As Kalyvas argues, "Conflating violence in the context of contentious action with civil war violence suggests a failure to recognize that war and peace are radically different contexts that induce and constrain violence in very different ways."[126]

Therefore, a distinct theoretic framework is needed to explain the difference in the intensity of ethnic conflicts. In order to contribute to such theory with an important, but by no means complete, explanation of conflict intensity, this thesis will focus on settlement patterns as structural conditions that affect both strategic decisions made by conflicting actors (motivational mechanism), and the ways these decisions are implemented (organizational mechanism).

To expound the proposed framework that potentially links ethnic settlements to the intensity of conflict, this chapter will first outline the general hypothesis and two mechanisms that link settlement patterns to intensity. Then, after brief discussion of possible scale of ethnic intermingling, two refined hypotheses will be introduced, which are related to local and regional intermingling. The last two sections of the chapter will be

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[126] Stathis N. Kalyvas, *The Logic of Violence in Civil War* (New York: Cambridge University Press, 2006), 22.

devoted to the discussion of other factors potentially affecting conflict intensity, and indicators that could potentially allow recognizing the proposed opportunity and organizational mechanisms in particular ethnic conflicts.

## A. THE HYPOTHESIS ON ETHNIC SETTLEMENTS AND INTENSITY OF CIVIL WAR

As a point of analytical departure, this thesis will begin by considering the following argument: An analysis of structural conditions that may lead nationalism into war has suggested that "The more densely nationalities are intermingled, the greater the risk of war."[127] In this exact formulation, this hypothesis applies only to the onset of conflict, and does not distinguish conflicts by their intensity. Moreover, it contradicts the argument that most ethnic groups cooperate most of the time[128] along with the finding that the "security dilemma" in interethnic relations is insignificant,[129] as well as the conclusion regarding the high risk of *concentrated* ethnic groups to experience conflict.[130] However, the mentioned hypothesis may have applicability to the intensity of inter-ethnic fighting *after the onset of conflict*, if rephrased in the following way:

*H1: Once the ethnic conflict has started, the more densely ethnicities are intermingled, the greater the intensity of warfare.*

If most ethnic groups coexist peacefully most of the time, and if concentrated ethnically homogeneous settlements increase the risk of conflict onset, then why would intermingling be associated with more intense fighting? How does the conflict environment change the mechanism of ethnic interactions?

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[127] Stephen Van Evera, "Hypotheses on Nationalism and War," in *Nationalism and Ethnic Conflict*, ed. Michael E. Brown (Cambridge, Mass: MIT Press, 1997), 29.

[128] James D. Fearon and David D. Laitin, "Explaining Interethnic Cooperation," *The American Political Science Review* 90, no. 4 (Dec., 1996), 715–735.

[129] Nicholas Sambanis, "Do Ethnic and Nonethnic Civil Wars have the Same Causes?: A Theoretical and Empirical Inquiry (Part 1)," *The Journal of Conflict Resolution* 45, no. 3 (2001), 280.

[130] Monica Duffy Toft, *The Geography of Ethnic Violence : Identity, Interests, and the Indivisibility of Territory* (Princeton, N.J: Princeton University Press, 2003).

The "security dilemma," which is at the core of the "risky intermingling" argument, stems from a similar neorealist concept originating in international relations theory. This concept is based on the assumptions of an anarchic system and a power balance as the source of security under which actors interact. While these assumptions may have questionable application for states in peacetime, they definitely pertain to the internal dynamics of ethnic civil war, which are characterized by the emergence of unconstrained alternative centers of coercive power that challenge established authority:

> Contentious action represents a challenge to the government in place in a context characterized by an undeniable monopoly of violence by the state. In contrast, the defining characteristic of civil war is the absence of such monopoly.[131]

Many ethnic conflicts are characterized by a large-scale victimization of civilians: "a considerable amount of violence in civil wars lacks conventional military utility and does not take place on the battlefield."[132] Since one or more sides in ethnic conflict identify with a certain ethnic group(s), this distinction will inform the actions of both combatants and noncombatants in two ways. First, militants are likely to operate along the lines of corresponding ethnic division and exploit local co-ethnics, irrespective of the latter's actual motives or preferences. Second, even if this is not what militants are actually doing, in the absence of reliable counterfactual information, it still remains the likely assumption that both the government and the population are going to make. If, based on this assumption, the government directs its counterstrategy against the ethnic group that is supposedly backing the insurgents, the ethnic division becomes self-reinforcing.

Mass mobilization capabilities of ethnic groups, which are deemed crucial for the onset of ethnic conflict, lose their importance when considering the intensity of violence after the initiation of hostilities. During the war, most of the population remains passive, and only a relatively small numbers of militants are needed to carry out violence and sustain insurgency. For example, riots that required extensive (although sometimes

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[131] Kalyvas, *The Logic of Violence in Civil War*, 23.

[132] Ibid., 20.

spontaneous) political mobilization almost ceased after the insurgency started in Sri Lanka and Punjab.[133] Perhaps level of cohesion and transaction costs remain important for the eventual success of the ethnic conflict, but the intensity of fighting may not be directly related to the overall number of supporters. For example, "the active support of a large portion of the public is usually not required to carry out mass killing. The killing itself is almost always performed by military or paramilitary organizations, often with little more than the passive acceptance of the rest of society—including members of the perpetrators' own social groups." [134]

The actual role of the "passive supporters," however, may vary significantly, since militants need accurate local information to identify targets and avoid being singled out by authorities. It is argued that violence in civil wars results from the convergence of the local population's intimate interests and motives, and the militants' efforts to exploit tactical advantage and establish full control over certain territory. [135] Both insurgents and the government need collaborators and denunciators, who constitute a "typically overlooked […] large 'gray zone' populated by those who partake in the process of violence in a variety of ways without, however, being directly involved in its outcome, as either perpetrators or victims."[136]

Therefore, ethnically diverse populations play a dual role in ethnic conflicts: on the one hand, it constitutes possible collaborators and denunciators; on the other hand, it constitutes the pool of feasible victims. Ethnic affiliation becomes crucial for drawing lines between these two categories since possible collaborators with insurgents become feasible victims of the government, and vice versa. Thus, greater intermingling of ethnic groups creates a larger potential pool of victims and collaborators.

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[133] Kalyvas, *The Logic of Violence in Civil War*, 23.

[134] Benjamin Valentino, "Final Solutions: The Causes of Mass Killing and Genocide," *Security Studies* 9, no. 3 (2000): 3.

[135] The theory of violence in civil wars that is built on this logic is described in Kalyvas, *The Logic of Violence in Civil War*.

[136] Ibid., 21.

## B.    THE MECHANISMS THAT LINK SETTLEMENT PATTERNS TO INTENSITY

In a situation where distinct ethnic groups engage in conflict, their patterns of settlement present a strategic challenge for the warring parties through at least two distinct mechanisms. The first mechanism is related to opportunity and threat, and treats intensity of conflict and casualty counts as premeditated damage. Fear and competition become increasingly pronounced during conflicts and they eventually inform the decisions of the ethnic groups.[137] The more that the opponents' population bases is intermixed, the harder it becomes to protect their own population and the easier the target the opponent's population becomes. Mixed settlements, "in conjunction with unequal and shifting power, will often produce incentives for preventive war." [138] Similarly, it is emphasized that "intermingling raises the risk of communal conflict during the struggle for national freedom, as groups that would be trapped as minorities in a new national state oppose its reach for freedom." [139]

This mechanism operates both on the strategic and tactical levels, inducing armed bands to conduct what they may declare preventive or retaliatory attacks, rescue missions, etc. Victimization of the local population on the basis of their ethnic attachment may pursue different goals, including personal gain. The particular motivation becomes less relevant than objectively existing conditions, which allow such goals to be achieved by the very proximity of targets and "windows of opportunity" presented by the weak protection of these targets. They make the logic of such motivations sound feasible.

The second, organizational, mechanism views greater intensity of conflict in more mixed communities as collateral damage. Arguably, "the vulnerability of civilians makes it possible for small bands of fanatics to initiate conflict. Because they are small and fanatical, these bands are hard to control."[140] Interspersed ethnic groups are likely to produce an abundance of small, disconnected and loosely organized militant units, which

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[137] Barry Posen, "The Security Dilemma in Ethnic Conflict," *Survival* 35, no. 1 (1993): 27–47.

[138] Ibid., 43.

[139] Van Evera, *Hypotheses on Nationalism and War*, 38.

[140] Posen, *The Security Dilemma in Ethnic Conflict*, 33.

are virtually impossible to effectively manage and command, and, subsequently, impossible to control the damage. The very nature of disconnected settlement patterns does not allow insurgents to establish stable lines of communication, along with command and control. At the same time, in many cases of interethnic violence, independent or loosely controlled armed units were responsible for most of the casualties, as in the ethnic wars in former Yugoslavia.[141] Comparing the Mau Mau rebellion in Kenya to the Yellow revolution in the Philippines, other authors also suggested that,

> Contrast in the locus and degree of centralized brokerage in the two cases (high in Philippines; low in Kenya) may help to account for the much higher levels of violence in Mau Mau than the Yellow revolution. For example, formal organizations may be more inclined to avoid violence than insurgent groups that are organized less formally and in more decentralized fashion.[142]

Therefore, the first mechanism posits that mixed settlements increase the cost of achieving superiority and control over the territory by the warring party, since all the enemy population must be displaced, killed, or subdued. The second mechanism posits that mixed settlements prevent establishing an "accountable" insurgent organization, and thus increase the amount of collateral damage. It is difficult to distinguish which mechanism is responsible for more damage and more intense fighting. Here, it is only argued that where settlement patterns of ethnic groups are more intermingled, these two mechanisms are likely to interplay and produce greater casualties.

## C.  THE SCOPE OF ETHNIC INTERMINGLING AND QUALIFIED HYPOTHESES

The argument concerning the two different types of intermingling of ethnic groups, on the regional and local scale, can further be considered, if this study adapts its reasoning to the problem of conflict intensity:

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[141] Ejub Stitkovac, "Croatia: The First War," in *Burn this House: The Making and Unmaking of Yugoslavia*, ed. Jasminka Udovicki and James Ridgeway (Durham, NC: Duke University Press, 1997), 153–173.; Jasminka Udovicki and Ejub Stitkovac, "Bosnia and Herzegovina: The Second War," in *Burn this House: The Making and Unmaking of Yugoslavia*, ed. Jasminka Udovicki and James Ridgeway (Durham, NC: Duke University Press, 1997), 174–214.

[142] Doug McAdam, Sidney G. Tarrow and Charles Tilly, *Dynamics of Contention* (New York: Cambridge University Press, 2001), 121.

Elites can lose control of events when intermingling extends to the local level: conflict can flare against the wishes of elites when unofficial killers seize the agenda by sparking a spiral of private violence. [...] Overall, local intermingling is more dangerous.

The most dangerous pattern of regional intermingling is one that leaves elements of one or both groups insecurely at the mercy of the other, but also allows for the possibility of forcible rescue—either by self-rescue (secession) or external rescue (intervention by an already-free homeland).[143]

The regional scale of intermingling implies that "regions are heterogeneous, small communities are homogeneous,"[144] and intermingling is considered local if "even small communities are heterogeneous."[145] However, these two types of settlement patterns and ethnic intermingling are more analytic categories than actual distinctions. The enclaves of an ethnically homogeneous population may continuously vary in size, from only a couple of households to villages and city districts to provinces. Therefore, the possible effect of settlement patterns on the intensity of warfare is also likely to be continuous, although not necessarily linear. Still, this distinction is feasible to adopt for the purposes of the analytic research. Based on this logic and building on H1, this thesis formulated two refined hypotheses:

*$H_{1a}$: Once the ethnic conflict has started, more locally mixed settlement patterns of ethnic groups increase conflict intensity;*

*and*

*$H_{1b}$: Once the ethnic conflict has started, regional intermingling of ethnic groups that leave an island of population increases conflict intensity.*

Arguably, these hypotheses provide a useful theoretic framework that can be tested empirically using new geo-coded data on ethnic settlement patterns and data on battle deaths, as well as through process tracing techniques in specific case studies.

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[143] Van Evera, *Hypotheses on Nationalism and War*, 40.

[144] Ibid., 40.

[145] Ibid., 40.

The proposed theoretic approach relaxes the unitary actor framework that was employed in the majority of previous research. Although the analysis is still focused on the group level dependent variable, the measurement of the independent variable is firmly based on the assumption that ethnic groups are not homogeneous and unitary actors. Essentially, the measurement of the independent variable should reflect to what degree the aggregated actor (ethnic group) is heterogeneous, decentralized, and "not unitary."

Another major assumption is that in an uncertain and decentralized civil conflict environment, it is easier to initiate "violence" than ensure "peace." Civil war is favorable to hit-and-run attacks, assaults on civilians and other poorly protected targets. In order to deny the opponent's ability to conduct such operations, the other side needs substantial defensive resources. If actors want to ensure a low level of violence in civil conflicts when a lot of vulnerable targets are present, they need numerous forces and a high level of control. Thus, a lack of organization and hierarchical control has uneven effects on defensive and offensive capabilities of actors: it significantly decreases the defensive potential of actors compared to its impact on offensive potential.

## D.    OTHER FACTORS AFFECTING CONFLICT INTENSITY

As it has been mentioned earlier, the proposed approach constitutes an overarching theory of violence in ethnic conflicts. Thus, the effects of various external and endogenous factors will be uneven due to their unique concatenations. A comprehensive theory that would satisfactorily explain intensity of ethnic civil wars needs to not only incorporate these factors into encompassing framework, but also requires much more fine-grained empirical evidence than is currently available to test its propositions. Therefore, this thesis is only a step toward the creation of such a theory. It is thus argued that the variance in settlement patterns as an independent variable is necessary, but not a sufficient condition for determining the degree of intensity of violence in ethnic civil wars.

Other potentially important factors for explaining the intensity of violence in ethnic armed conflicts include:

*1) International peacekeeping operations.* Arguably, external interference into a conflict through peacekeeping operations, especially in the early stages of fighting, has the potential for significantly reducing the costs of human lives. Whether peacekeeping is an effective measure to resolve the conflict and achieve peace is another matter. But since the major goals of peacekeeping include reducing violent clashes between warring parties, it may have a negative effect on the amount of committed violence. However, in many cases, international peacekeeping operations are conducted under conditions of state collapse, or they start only after the conflict has become a major concern for international and/or regional stability. In both cases, this usually means that the humanitarian impact and human cost of the war are already high.

*2) Availability of arms supplies and other external support.* As it was discussed in Chapter III, an abundance of small arms is found to correlate with more intense ethnic conflicts.[146]

*3) Level of democracy, degrees of polarization, horizontal inequality and exclusion from political power.* Coercive regimes may be more prone to employ violence towards dissenting ethnicities.[147] Higher levels of political discrimination and xenophobia may make mass victimization easier to achieve.

*4) Geography.* Rough terrain (mountains, dense jungles, swamps, etc.) constrains a states' efforts to destroy insurgency in remote areas, but also impedes frequent or mass movement of troops, and makes it easier to protect small villages or escape attack. Limited access to certain areas inhibits accurate or complete documenting of the violent effects of civil conflicts, thus actual levels of conflict severity may differ from registered data.

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[146] John Sislin and Frederic S. Pearson, *Arms and Ethnic Conflict* (Lanham, MD: Rowman & Littlefield Publishers, 2001); Lacina, *Explaining the Severity of Civil War*, 276–289.

[147] Lacina, *Explaining the Severity of Civil War*, 276–289.

*5) Type of conflict and incompatibility.* The pool of ethnic conflicts analyzed here includes irredentist/secessionist wars, conflicts for political autonomy, group survival and more. The fighting may be waged under symmetric or asymmetric conditions. These characteristics of major incompatibility and power balance may also be linked to the amount of violence in a conflict.

Other factors may also include variables related to the size and strength of the major actors, strategic interaction between the major actors, their master narratives, and their framing and mobilization efforts. Some variables (e.g., availability of arms) may be easier to measure than others (e.g., framing). However, their discussion deserves separate research efforts which exceed the boundaries of this thesis.

At the same time, two other intuitively important variables seem to have little explanatory power:

*6) Duration of episode.* Lacina notes that "a faster death rate does not seem to generate a countervailing tendency toward shorter conflict. Thus, factors that predict large numbers of death should also predict high rates of death."[148]

*7) Size of host country population.* Lacina also writes that "a larger population does not predict a higher number of deaths. The nonrelationship between total deaths and total population means that normalizing deaths by population may too heavily discount deaths in large countries, as war does not seem to scale up in populous nations."[149]

## E.   THE INDICATORS RELATED TO THE OPPORTUNITY AND ORGANIZATIONAL MECHANISMS

How can we identify whether the organizational or motivational mechanisms are present in specific instance of ethnic civil war? The indicators (both by case and on a global level) that may point to the validity of the specified causal mechanisms can be divided into five major categories:

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[148] Lacina, *Explaining the Severity of Civil War*, 285.

[149] Ibid., 286.

### 1.    Indicators Related to Central Actors

The intensity of violence in an ethnic civil war is expected to be higher, if:

- central actors choose strategies (including propagating messages and master narratives) that target smaller pockets of ethnic "enemy" populations as opposed to larger territories;

- actors claim rights and attempt to seize larger pieces of a territory with a dispersed ethnic "enemy" population as opposed to homogeneous parts of an ethnic "enemy" territory;

- central actors exercise inefficient or low control over friendly forces due to their dispersion over territory with pockets of "friendly" and "enemy" population;

- actors define their enemy broadly, as an entire "other" ethnic group, as opposed to a smaller, specific political faction or group of political elites.

### 2.    Indicators Related to Perpetrators

The intensity of violence in an ethnic civil war is expected to be higher, if:

- the majority of perpetrators reside and conduct attacks in ethnically heterogeneous regions;

- more centralized or regular forces conduct attacks on small pockets of an enemy population, as opposed to attacking larger enclaves of a population;

- actual perpetrators of violence have unsystematic communication with and control from the center. They do not receive direct tactical orders and do not get most of their logistics from "the center." They are organized in small bands and local militias that comprise local dwellers and are mostly concerned with "self protection" and/or retaliatory attacks, but can also include mercenaries and outsiders. The major obstacle to systematic control is the absence of stable land communication due to "intervening" areas of ethnic enemy populations;

- perpetrators choose tactics based on hit-and-run attacks, looting, "trying" and murdering ethnic "others," coercion and forcing ethnic "others" to flee the area. Overall, the amount of small bands and militias is large compared to organized regular forces. These small local units are responsible for most of the operations and for most of the casualties. More centralized control, coordination and cooperation between units increases as ethnic "others" are killed or flee the area, thus making it more ethnically homogeneous;

- perpetrators use their own local knowledge or help from local denunciators to find and attack ethnic "enemy" populations, which are unable to mount adequate resistance;

- the actions of small bands and militias do not necessarily reflect or correctly interpret the master message and/or the official political position of the top leadership, but they use certain logic of inter-ethnic animosity to justify violence towards "others."

### 3. Indicators Related to Victims

The intensity of violence in an ethnic civil war is expected to be higher, if:

- most victims are ethnic "others" residing in the areas of ethnic cohabitation, or close to areas belonging to enemy population. They reside in smaller communities as opposed to larger areas of ethnically kin population;

- insurgents target ethnic "others" allegedly siding with the government and/or government forces target insurgent ethnic group populations;

- victims also include "collaborators," or those ethnic kin who express moderate views towards government or ethnic "others."

### 4. Indicators Related to the Environment

The intensity of violence in an ethnic civil war is expected to be higher, if:

- the geographic environment and level of infrastructure development (roads, communications, etc.) do not allow the establishment of stable communication and control over smaller enclaves of ethnically kin population on behalf of either the government or insurgency;

- social environment consists of rural but densely populated areas with dispersed heterogeneous population, as opposed to less densely populated or more homogeneous areas;

- islands of ethnically kin communities cannot unite in larger units or networks because they are separated by areas inhabited by ethnic "enemy" populations;

- environment is favorable to offensive operations as opposed to defensive operations;

- environment prevents victims from being able to effectively escape targeting;

- most violence is committed in areas of cohabitation and not in areas with homogeneous population.

## 5.      Indicators Related to Endogenous Processes of Civil War

The intensity of violence in an ethnic civil war is expected to be higher, if:

- the conflict undergoes more escalation/de-escalation shifts as opposed to fewer escalations/de-escalations;

- the conflict experiences upsurges of ethnic violence as opposed to a steady or low intensity of warfare. The initial upsurge leads to ethnic cleansing and "homogenization" of ethnically diverse areas;

- there are numerous shifts of control over smaller areas of ethnically heterogeneous populations, as opposed to fewer such shifts;

- sides engage in retaliatory attacks on small enclaves of ethnic "enemy" population;

- spirals of violence target poorly protected civilian populations.

## F.   CONCLUSION

This list is far from comprehensive and, of course, it requires further scrutiny and debate. Furthermore, not all these indicators have to be present in a case in order for it to be characterized by a high intensity of violence. Additionally, not all of the indicators can be incorporated into analysis with equal success. Still, this list provides a useful starting point for further investigation of the possible link between configurations of ethnic settlements and violence in ethnic civil wars. Currently, these indicators can be used as guidelines for case studies and can be helpful when examining case specific data. Perhaps further research could be done to collect systematic information that would capture the listed factors, which could then be used to test this data against intensity of ethnic conflict. Next, this study will discuss the statistical test of the impact of settlement patterns on the intensity of conflict.

# V. STATISTICAL ANALYSIS OF THE INTENSITY OF VIOLENCE IN ETHNIC CIVIL WARS

This chapter describes the process and results of the statistical analysis of the possible relationship between settlement patterns and the intensity of violence in ethnic civil wars. After a brief discussion of the dependent and independent variables, this chapter will go on to explain the process of data collection for the measurement of these variables. Additionally, there will be a discussion of the most substantial problems with the available data that may affect the statistical regression results. The next section in this chapter details the research design for the measuring of the effect of the independent variables on the conflict intensity. The concluding part discusses the statistical regressions results. Unfortunately, the general findings in this chapter do not provide sufficient evidence to either support or reject the proposed hypotheses regarding settlement patterns and their affect on the intensity of ethnic civil wars.

## A. WHAT IS TO BE MEASURED?

For both H1a (local cohabitation) and H1b (regional intermingling), the **dependent variable** (*intensity*) in this thesis is measured as the total number of recorded battle deaths divided by the duration of the conflict in days.[150] To calculate the dependent variable, this thesis relies on data from the PRIO Battle Deaths Dataset v.3.0 for the period 1946–2008.[151] The definition of battle-related deaths used in this dataset and, subsequently, employed in this thesis, was provided in Chapter II. The dataset provides estimates of annual battle deaths for each conflict, and also includes the dates of initiation and the dates of the ending of the wars and, if applicable, the dates of separate conflict episodes within the same wars. This allows calculations of both the total severity and the duration of conflicts. Included in this analysis were only cases defined by the Ethnic

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[150] All the variables that were used in the statistical tests are explained in Appendix C.

[151] Bethany Lacina and Nils Petter Gleditsch, "Monitoring Trends in Global Combat: A New Dataset of Battle Deaths," *European Journal of Population* 21, no. 2–3 (2005): 145.

Power Relations (ERP) dataset[152] and EAC[153] as ethnic conflicts.[154] Again, as was mentioned earlier, this thesis' measure of the dependent variable is not perfect because it does not include other aspects of violent impacts of ethnic conflicts. The span of intensity measures for ethnic conflicts is considerable. However, a very large portion of the civil wars, in the dataset, have relatively small intensity and/or total severity:
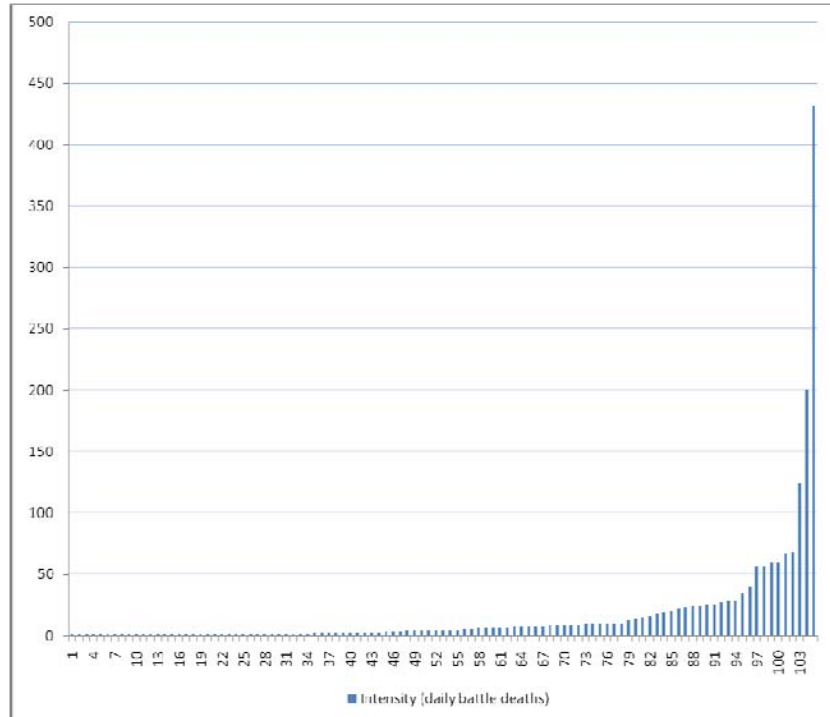


Figure 2.    The Intensity of Violence in Ethnic Conflicts, in daily battle deaths

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[152] A. Wimmer, L. Cederman and B. Min, "Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set," *American Sociological Review* 74, no. 2 (2009): 316; L. Cederman, A. Wimmer and B. Min, "Why do Ethnic Groups Rebel? New Data and Analysis," *World Politics* 62, no. 1 (2010): 87; Lars-Erik Cederman; Brian Min; Andreas Wimmer, "Ethnic Power Relations dataset," http://hdl.handle.net/1902.1/11796 (accessed October 22, 2010).

[153] Wimmer, Cederman and Min, *Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set*, 316; Cederman, Wimmer and Min, *Why do Ethnic Groups Rebel? New Data and Analysis*, 87; Lars-Erik Cederman; Brian Min; Andreas Wimmer, "Ethnic Armed Conflict dataset," http://hdl.handle.net/1902.1/11797 (accessed  October 22, 2010).

[154] If the definition of ethnic conflict in EAC and EPR included several episodes or conflicts as defined in PRIO's Battle Deaths dataset, the durations of episodes/conflicts were added. However, the instances of aggregated conflicts are not numerous. The reconciliation of the two datasets is described in Appendix A.

It is noteworthy that three cases in our subset of ethnic civil wars display unusually high intensity of violence, at the same time having relatively small number of total deaths and short duration. These are the Bolivian revolution of 1952 (Warid 10101) and the attempted coup in Cameroon in 1984 (Warid 25900) that both lasted only 4 days and have registered intensity of 431,25 and 125 respectively; and the military coup in Syria in 1966 (Warid 20200) that has registered severity of 200 deaths and duration of one day. These observations are potential outliers and may mislead the analysis by too strongly affecting the regression results. It has been decided to exclude them from analysis.

The **explanatory variable** for the variance in intensity of ethnic conflict investigated in this thesis is the configuration of ethnic settlements (*ethnic settlements pattern*). The arrangement of ethnically homogeneous settlements surrounded by a distinct population may vary from smaller to larger pieces of territory continuously: parts of village population being ethnically homogeneous → entire villages being ethnically homogeneous → ethnically homogenous locales (districts) → ethnically homogeneous regions (parts) of a country. The bottom line of this thesis' argument is that, in civil war, more dispersed ethnic groups will be involved in deadlier conflicts.

## B.    CREATING THE DATASETS

To explore the proposed link between settlement patterns and the intensity of ethnic conflicts, this thesis uses data from the "Geo-referencing Ethnic Power Relations" (GeoEPR)[155] and "Geo-referencing of ethnic groups" (GREG)[156] spatial datasets. These datasets provide geo-referenced data on ethnic settlements, which consists of polygons that represent areas populated by certain ethnic groups. Using the ArcGIS[157] software,

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[155] J. Wucherpfennig, N. B. Weidmann, L. Girardin, L.-E. Cederman and A Wimmer,"Politically Relevant Ethnic Groups across Space and Time: Introducing the GeoEPR Dataset," *Journal of Conflict Management and Peace Science*, forthcoming; Julian Wucherpfennig, Nils B. Weidmann, Lars-Erik Cederman, Luc Girardin, Philippe Duhart, Gustav Brown, James Flora, Andreas Wimmer, *GeoEPR dataset*, http://hdl.handle.net/1902.1/14206 (accessed 22 October, 2010).

[156] Nils B. Weidmann, Jan Ketil Rød and Lars-Erik Cederman, "Representing Ethnic Groups in Space: A New Dataset," *Journal of Peace Research* 47, no. 4 (2010), 491–499.

[157] ESRI ArcGIS, http://www.esri.com/

this study calculated two separate sets of measures for the independent variable. The measures are based on area estimates for polygons, as well as on population estimates that were calculated by overlapping the polygon boundaries with the raster data from Columbia University Center for International Earth Science Information Network's (CIESIN) Gridded Population of the World (GPW) dataset.[158]

GREG was created on the basis of the maps from Atlas Narodov Mira (ANM).[159] The authors of the GeoEPR dataset did not specify the source of their data. In some cases, the polygons from the GREG and the GeoEPR coincide, but in others the two datasets provide different settlement boundaries for ethnic groups. If two or more ethnic groups represented in the GeoEPR live in the same area, their corresponding polygons will overlap. The GREG does not allow overlapping of polygons, but delineates polygons with two or three groups living together.

Atlas Narodov Mira, which is the basis of the GREG, includes 57 maps of ethnic groups for all the regions of the world. It employs a uniform list of ethnicities across countries worldwide. ANM was used as a basis for calculating the index of Ethno-Linguistic Fractionalization, used in many contemporary studies.[160] Overall, the GREG includes 929 groups represented by 8,969 polygons: 7,383 polygons in GREG contain one group, 1,552 polygons contain two groups, and 34 polygons contain three groups. Additionally, 319 groups found in ANM do not have any territorial bases, and are not included in the GREG. The largest polygon occupies an area of 6,954,564 km$^2$ and the smallest polygon has the size of 0.59 km$^2$.[161]

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[158] The Gridded Population of the World dataset, http://sedac.ciesin.columbia.edu/gpw/ (accessed 22 October, 2010). The dataset represents geo-referenced raster data, where each cell's value represents the number of people living in that particular area. In this thesis, the earliest available data is used (1990).

[159] Solomon Il'ich Bruk and others, *Atlas Narodov Mira* (Moskva: Glavnoe upravlenie geodezii i kartografii Gosudarstvennogo geologicheskogo komiteta SSSR, 1964).

[160] For extensive discussion of the GREG dataset, see Weidmann, Rød and Cederman, *Representing Ethnic Groups in Space: A New Dataset*, 491–499.

[161] Ibid., 494.

Authors of the dataset point out certain problems that the GREG inherited from the ANM:

1. **The ANM does not specify sources of its data.** Therefore, it is difficult to judge what level of accuracy and confidence its maps provided:

> The source of the information contained in the ANM remains somewhat obscure. A short text at the beginning of the volume lists three different types of sources: (1) ethnographic and geographic maps assembled by the Institute of Ethnography at the USSR Academy of Sciences, (2) population census data, and (3) ethnographic publications of government agencies. Still, it remains unclear what kind of information was used for which maps, and how groups were selected in the first place.[162]

2. **Large granularity.** The accuracy of the GREG hinges on the scales of ANM maps, which range from 1:4,000,000 up to 1:15,000,000. Furthermore, even the best digitizing effort introduced additional deviation from ANM maps of up to 7.5–10 km.[163] Weidmann also finds mathematic evidence that the ANM maps incorporated data of different initial resolutions. For example, there was more detailed data for areas under Soviet control than for other parts of the world.[164] Therefore, less explored areas of the world are most likely covered with more approximate and schematic polygons, which may "limit the comparability across countries."[165]

3. **Simplification of data.** It is assumed that if the territory is assigned to a certain group, there are no representatives of other ethnicities there. Arguably, in a substantial proportion of polygons it is actually not so. This simplification becomes even more important when the GREG data is combined with the geo-referenced Gridded Population

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[162] Weidmann, Rød and Cederman, *Representing Ethnic Groups in Space: A New Dataset*, 493.

[163] Ibid., online appendix, http://www.icr.ethz.ch/research/greg/Appendix.pdf (accessed 28 September, 2010).

[164] Nils Benedikt Weidmann, "Critical Configurations: Settlement Patterns and Ethnic Violence," *ETH*: 141, http://e-collection.ethbib.ethz.ch/show?type=diss&nr=18257 (accessed September 28, 2010).

[165] Ibid., 48.

of the World dataset[166] to obtain population estimates for each group polygon.[167] These small-in-numbers minorities may actually become the victims of ethnic conflicts, but there is no way for their presence to be measured in the GREG dataset. In fact, authors of the GREG dataset deliberately excluded some ANM data on sporadic settlements represented by points on the ANM maps.

4. **Outdated, problematic group categories, and endogeneity.** ANM captures an ethnic picture of the world circa 1964. This makes the data useful for this analysis since "the ethnic configuration as captured by GREG is causally prior to the majority of ethnic conflicts in the post-World War II period."[168] At the same time, conflicts prior to that date are probably going to suffer from an endogeneity problem since ethnic settlement patterns are greatly influenced by ethnic conflicts.[169] To address this deficiency, the statistical analysis in this thesis will include separate tests of episodes after 1964. Also, because the maps and list of groups were compiled 45 years ago, many ethnic categories have become irrelevant or their names have changed. For example, Afars in Ethiopia most closely correspond to GREG's category Danakil. Thus, some ethnic categories used in the analysis adopt more modern names used in EPR.

In its turn, GeoEPR also provides worldwide coverage of ethnic groups. It consists of 755 records for 731 ethnic groups from the EPR dataset. Some groups are represented by several entries that correspond to different time periods, if substantial changes in their settlements were recorded. Each record may consist of numerous polygons. It covers only groups that are coded in EPR as "regionally based," "regional

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[166] The Gridded Population of the World dataset, http://sedac.ciesin.columbia.edu/gpw/ (accessed October 22, 2010).

[167] The same problem is highlighted in Weidmann, Rød and Cederman, *Representing Ethnic Groups in Space: A New Dataset*, 495.

[168] Weidmann, Rød and Cederman, *Representing Ethnic Groups in Space: A New Dataset*, 496.

[169] The case of Bosnia is exemplary and can be found in Weidmann, *Critical Configurations: Settlement Patterns and Ethnic Violence*, 141.

and urban," or "aggregate." Boundaries for "dispersed" groups correspond to state boundaries.[170] Groups coded as "migrant" or "urban" are excluded from the dataset.

The detailed discussion of the GeoEPR is anticipated in a forthcoming publication.[171] Form the available information, it remains unclear what sources the authors of this publication used to compile the dataset. It also suffers from granularity and simplification problems specified for the GREG dataset. For the most part, the authors specify time relevance of the polygons that includes years of ethnic civil war in which the group participates. However, it is not clear whether polygons more accurately capture settlement patterns before, during, or after the conflict. Since war may have a large impact on ethnic settlements, the problem of endogeneity persists.

The EAC and EPR datasets link ethnic conflicts to politically relevant ethnic categories as defined in EPR, "in the name of which an armed organization instigated the conflict."[172] In this thesis, their coding of ethnic wars was matched with the PRIO data using unique identifiers of conflicts. [173] This process is documented in Appendix A.

The list of ethnic groups from GREG was matched with the names of ethnic groups used in EPR, and then matched with PRIO BD data. In some cases, several ethnic categories of the GREG dataset were aggregated into one ethnic category used in EPR. The process of matching GREG to EPR is documented in Appendix B.

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[170]Julian Wucherpfennig, Nils B. Weidmann, Lars-Erik Cederman, Luc Girardin, Philippe Duhart, Gustav Brown, James Flora, Andreas Wimmer, "GeoEPR dataset," http://hdl.handle.net/1902.1/14206 (accessed October 22, 2010).

[171] Julian Wucherpfennig, Nils B. Weidmann, Lars-Erik Cederman, Luc Girardin, Philippe Duhart, Gustav Brown, James Flora, Andreas Wimmer, "GeoEPR dataset," http://hdl.handle.net/1902.1/14206 (accessed October 22, 2010); ,Wucherpfennig, J., Weidmann, N. B., Girardin, L., Cederman, L.-E. and Wimmer, A., "Politically Relevant Ethnic Groups across Space and Time: Introducing the GeoEPR Dataset," forthcoming in the *Journal of Conflict Management and Peace Science*.

[172] Cederman, Wimmer and Min, *Why do Ethnic Groups Rebel? New Data and Analysis*, 87.

[173] Lars-Erik Cederman; Brian Min; Andreas Wimmer, "Ethnic Armed Conflict dataset," http://hdl.handle.net/1902.1/11797 (accessed October 22, 2010); Wimmer, Cederman and Min, *Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set*, 316; Cederman, Wimmer and Min, *Why do Ethnic Groups Rebel? New Data and Analysis*, 87.

From GeoEPR and GREG, subsets of settlements were chosen that included only ethnic groups that participated in conflicts; data on all other groups was dropped. Finally, this thesis employed the CIESIN GPW dataset[174] to obtain population estimates for each polygon in the subsets. The CIESIN GPW dataset consists of raster map data, where each cell represents the area of 2.5'x2.5' (approximately 5x5 km at the equator). A cell's value indicates the number of people that live in the corresponding area. Using the ArcGIS software, the values of the cells within each polygon were summed to obtain the population estimates for the areas populated by particular ethnic groups. The earliest population figures are available for 1990. Again, these population estimates present endogeneity problems because even if the number of battle deaths in conflict were low compared to overall country population (several thousand or tens of thousands), overall number of deaths (including one-sided and communal violence), as well as refugee and internally displaced persons (IDP) flows, will have a especially significant impact on population figures in cells plagued with conflicts. But to drop all the cases prior to 1990 would irreparably decrease the sample. To alleviate the endogeneity problem, the regressions with the data on areal and population distribution will be done separately.

The procedures described above resulted in two datasets containing records of polygons for each ethnic group, with indicated area and population estimates for each polygon, and an indication of a group's participation in specific conflicts with estimates of the battle deaths. Ideally, it would be best to obtain settlement polygons and population estimates relevant to the time period immediately before the outbreak of civil war, but, unfortunately, data employed in the analysis here is the best that has been found.

## C.    RESEARCH DESIGN

As was mentioned earlier, the statistical analysis in this thesis was conducted on two independent tests of ethnic settlement data that was based on two different geospatial datasets: GeoEPR and GREG. Within both datasets, there were separately tested measures related to regional and local intermingling. These measures were subdivided

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[174] The procedure on how to extract values for population estimates is illustrated in Weidmann, Rød and Cederman, *Representing Ethnic Groups in Space: A New Dataset*, 491–499.

into territory and population estimates for regional and local intermingling. All the tests were conducted on all of the available samples and on episodes that occurred after 1964 to control for the endogeneity of data contained in the original datasets). The division of variables is shown in Table 2.

Table 2.    The Variables and the Universe of Cases

| | | | GeoEPR | | | | GREG | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | H1a (local) | | H1b (regional) | | H1a (local) | | H1b (regional) | |
| | | | Territory | Population | Territory | Population | Territory | Population | Territory | Population |
| Universe of cases | All | Prior 1964 | geoeprpracohab | geoeprprpcohab | geoeprea2 | geoeprep2 | gregpracohab | gregprpcohab | gregea2 | gregep2 |
| | | After 1964 | -//- | -//- | -//- | -//- | -//- | -//- | -//- | -//- |

To test the hypothesis **H1b** (regional intermingling), this thesis will measure the relative sizes of ethnic settlement clusters separated from the rest of the kin population. For the simple measures of areal and population concentration, this thesis adopts a procedure described by Weidmann[175] and based on the Herfindahl concentration formula, which operates with the proportions of total territory or population. If $t_i$ is a polygon of a group, and the total territory of a group consists of $n$ polygons, then:

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[175] Weidmann, *Critical Configurations: Settlement Patterns and Ethnic Violence*, 62.

$$\text{Areal concentration} = \sum_{i-1}^{n} a(t_i)^2$$

where $a(t_i)$ is the proportion of the total group's area that belongs to polygon $t_i$; and

$$\text{Population concentration} = \sum_{i=1}^{n} p(t_i)^2$$

where $p(t_i)$ is the proportion of the total group's population that belongs to polygon $t_i$.

Since the proportions of territory (both area and population wise) are represented in fractions of 1, a group that consists of a greater amount of separated clusters will have a lower concentration measure. It is expected that in a statistical analysis these coefficients will have negative values, as with the decreasing value of concentration, the likelihood of greater intensity of conflict increases.

To measure the effect of local intermingling on conflict intensity (hypothesis **H1a)**, this study will employ the proportion of the territory that is inhabited by representatives of different ethnicities together with the ethnic group in conflict. It is known that the larger the proportion of cohabited territory, the greater the likelihood of higher casualties in the corresponding conflict. Thus, the coefficient is expected to have a positive impact on conflict intensity:

$$\text{Proportion of cohabited area} = \sum_{i-1}^{n} a_c(t_i)$$

where $a_c(t_i)$ is the proportion of the total group's area that belongs to polygon $t_i$, which is cohabited by the group in conflict together with other groups; and

$$\text{Proportion of cohabited population} = \sum_{i=1}^{n} p_c(t_i)$$

where $p_c(t_i)$ is the proportion of the total group's population that belongs to polygon $t_i$, which is cohabited by the group in conflict with other groups.

The variables that were calculated separately for GeoEPR and GREG datasets are summarized in Table 3:

Table 3.    Descriptive Statistics for Variables on Settlement Patterns

| Variable name | STATA variable name | Obs | Mean | Std. Dev. | Min | Max | Expected effect |
|---|---|---|---|---|---|---|---|
| Intensity | intensity | 102 | 10.49792 | 15.39128 | .0571429 | 68.25938 | n/a |
| Areal concentration | geoeprea2 | 102 | .7926554 | .2412424 | .0841359 | 1 | negative |
| Population concentration | geoeprep2 | 102 | .7944737 | .2468744 | .0751526 | 1 | negative |
| Proportion of cohabited area | geoeprpracohab | 102 | .626924 | .4522246 | 0 | 1 | positive |
| Proportion of cohabited population | geoeprprpcohab | 102 | .6344046 | .4443358 | 0 | 1 | positive |
| Areal concentration | gregea2 | 75 | .8183941 | .2352596 | .0778093 | 1 | negative |
| Population concentration | gregep2 | 75 | .8219298 | .2362144 | .0705474 | 1 | negative |
| Proportion of cohabited area | gregpracohab | 75 | .0677583 | .1191229 | 0 | .4878194 | positive |
| Proportion of cohabited population | gregprpcohab | 75 | .1024427 | .1581872 | 0 | .6381506 | positive |

In order to control for the impact of other factors on conflict intensity, the statistical tests will include additional variables from EPR and PRIO datasets, as well as statistical data from Lacina's tests.[176] As mentioned in Chapter IV, other factors that have impact on conflict intensity include availability of arms supplies and other external support, geography, size and strength of major actors, level of democracy, degrees of polarization, horizontal inequality and exclusion from political power, type of conflict and incompatibility, and peacekeeping efforts.

To control for the availability of arms supplies and other external support, this study will use Lacina's cold war dummy, which divides conflict into those that started prior to 1989 (when the assistance from major powers was more easily accessible both to states and rebels), and after that date. Of course, this measure is only a crude approximation of the availability of external support. The tests will also include Lacina's measure of proportion of mountainous terrain in overall country's territory as a proxy for the impact of geography on the intensity of conflict. To measure a country's economic and military capabilities, this thesis will use Lacina's logged measure of GDP (as a proxy for economic performance and strength) and the military quality coefficient, defined as amount of military expenditures divided by the number of military personnel. The ethnic rebels' strength, which generally derives from their population base, will be proxied by the EPR's measure of the ethnic group's relative size. In order to control for the possible impact on conflict of democratic institutions and processes, this study will use Lacina's democracy dummy, which codes democratic and non-democratic regimes. The degree of polarization can be captured by the EPR's measure of political status of ethnic groups in respective societies. The analysis will also include the PRIO's variable on the type of incompatibility that is being fought over (territory or government), and type of the ethnic group's settlement (GeoEPR). The test of the impact of peacekeeping operations was not performed due to the likelihood of its endogeneity in relation to conflict intensity. The

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[176] Lacina, *Explaining the Severity of Civil Wars*, 276–289. The coding of variables is provided in Appendix C. We disregard the variables related to ethnic diversity, since our sample of conflicts is limited to exactly such civil wars. We also exclude the variables related to duration of conflict (Duration and lnDuration), since our measure of conflict intensity already includes the factor of time.

variables from PRIO, EPR and GeoEPR have not been previously tested in models designed to explain conflict intensity, so their overall performance presents additional interest.

The inclusion of variables from external sources presents further challenges to this analysis. For the inclusion of Lacina's data reduced the sample to 53 cases. In addition, some of the parameters are country level data, not the disaggregated actor-level data. They were accepted only because better measures were not available. Table 4 provides general description of the variables.

Table 4.     Descriptive Statistics for Model Variables

| Variable | Obs | Mean | Std. Dev. | Min | Max |
| --- | --- | --- | --- | --- | --- |
| statuscode | 102 | 2.77451 | 1.597689 | 1 | 6 |
| settletype | 102 | 1.862745 | 1.235123 | 1 | 6 |
| size | 102 | .1742549 | .2233211 | .001 | .98 |
| incomp | 102 | 1.362745 | .4831664 | 1 | 2 |
| cw | 53 | .6226415 | .4893644 | 0 | 1 |
| democ | 53 | .2075472 | .4094316 | 0 | 1 |
| milqual | 53 | 6195.828 | 8682.993 | 189.8268 | 40837.31 |
| size | 102 | .1742549 | .2233211 | .001 | .98 |
| incomp | 102 | 1.362745 | .4831664 | 1 | 2 |

**D.     DISCUSSION OF REGRESSION RESULTS**

The statistical tests are based on the OLS regression and have been conducted using the STATA[177] package. Prior to testing the variables on settlement patterns, this study separately regressed the models that incorporated all other variables, including Lacina's data that reduced the sample to 53 observations, and the model that included only EPR/PRIO variables (which do not limit the sample).[178]

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[177] STATA, http://www.stata.com

[178] Detailed results are reported in Appendix D.

Table 5.     Regression Results for Models Excluding Settlement Data

| Variable | EPR/PRIO | Lacina | All | Short |
|---|---|---|---|---|
| statuscode | 1.837*<br>(.949) | | 4.532***<br>(1.427) | 4.129***<br>(1.323) |
| settletype | 1.455<br>(1.234) | | -.896<br>(1.581) | |
| size | 2.435<br>(8.116) | | 2.32<br>(10.84) | |
| incomp | 3.826<br>(3.721) | | -1.258<br>(5.874) | |
| cw | | 1.238<br>(5.094) | 3.843<br>(4.933) | |
| democ | | -13.82**<br>(5.413) | -15.826***<br>(5.691) | -15.18***<br>(4.8) |
| lngdp | | -1.335<br>(1.049) | -1.489<br>(1.022) | |
| milqual | | -.00017<br>(.00027) | -.0002<br>(.0002) | |
| mountain | | .0196<br>(.088) | .035<br>(.085) | |
| _cons | -2.952<br>(6.094) | 25.809***<br>(7.351) | 17.614<br>(11.59) | 7.9**<br>(3.808) |
| observations | 102 | 53 | 53 | 53 |
| R-squared | 0.0715 | 0.1814 | 0.3530 | 0.2729 |
| Adjusted R-squared | 0.0332 | 0.0943 | 0.2175 | 0.2439 |

* p<0.1       ** p<0.05       *** p<0.01

When tested separately, the EPR/PRIO and Lacina's sets of variables have little predictive power, with low pseudo $R^2$ values. The third model includes data from both datasets. The variables that code state regime and political status of the respective ethnic group are consistently statistically significant. The adjusted $R^2$ in the third model is relatively high (0.2175) compared to other models that will be tested further, and the variables are even more significant (p=0.003) in the fourth model that includes only these two factors, with the pseudo $R^2$ even higher—0.2439.

The direction of the influence of these two variables is especially interesting. As could have been predicted, the democracy coefficient has negative sign—that is, regimes that are more democratic face lower risk of severe casualties in ethnic civil wars. At the

same time, the statuscode variable has positive sign. The value of this variable increases for ethnic groups that enjoy higher status in respective societies and more political rights in the corresponding polity. Thus, groups that have had higher standing in less democratic societies are associated with greater intensity of violence. What may explain such connection? Perhaps, for groups that have enjoyed higher status in undemocratic states, the stakes in the conflict are higher (e.g., they view conflict as a zero-sum game), or they have better access to military resources. At the same time, the statistical significance of these two particular variables may be attributed to possible difference in scope and completeness of reporting on conflicts involving high profile and marginal groups in undemocratic societies. In any case, this finding deserves further scrutiny in separate research.

The following Tables 6 and 7 report the results of the statistical tests of the ethnic settlement variables for GeoEPR and GREG. Standard errors are reported in parentheses. The models are testing separately variables estimating population and area. In addition, it has been decided not to test the H1a and H1b variables in one model due to their possible collinearity, which is especially dangerous due to small sample of available observations.

Table 6. Regression Results for Variables Based on GeoEPR

| Testing hypothesis | H1a (local intermingling) | | | | | | | | H1b (regional intermingling) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Using data on | Area | | | | Population | | | | Area | | | | Population | | | |
| Including cases | All | | After 1964 | | All | | After 1964 | | All | | After 1964 | | All | | After 1964 | |
| Including variables | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO |
| geoeprpracohab | -3.751 | -3.447 | -6.126 | -2.203 | | | | | | | | | | | | |
| | (5.535) | (3.446) | (5.866) | (3.658) | | | | | | | | | | | | |
| geoeprprpcohab | | | | | -2.282 | -3.394 | -4.964 | -2.001 | | | | | | | | |
| | | | | | (5.803) | (3.507) | (6.379) | (3.734) | | | | | | | | |
| geoeprea2 | | | | | | | | | 2.683 | 9.247 | .1925 | 8.868 | | | | |
| | | | | | | | | | (9.4) | (6.53) | (10.374) | (7.084) | | | | |
| geoeprep2 | | | | | | | | | | | | | .8152 | 6.034 | .239 | 5.102 |
| | | | | | | | | | | | | | (9.587) | (6.323) | (10.362) | (6.775) |
| statuscode | 4.731*** | 2.014** | 3.485** | 1.689* | 4.641*** | 1.991** | 3.367** | 1.66* | 4.623*** | 2.147** | 3.1* | 1.805* | 4.545*** | 1.983** | 3.0962* | 1.615 |
| | (1.466) | (.9658) | (1.624) | (.998) | (1.468) | (.9629) | (1.631) | (.9934) | (1.477) | (.9697) | (1.618) | (.9805) | (1.453) | (.9622) | (1.612) | (.9687) |
| settletype | -1.069 | 1.398 | -1.134 | .823 | -.999 | 1.389 | -1.106 | .8157 | -.8175 | 1.742 | -.985 | 1.0966 | -.8811 | 1.615 | -.988 | 1.0107 |
| | (1.611) | (1.235) | (1.51) | (1.242) | (1.618) | (1.236) | (1.523) | (1.243) | (1.622) | (1.2445) | (1.546) | (1.249) | (1.610) | (1.246) | (1.533) | (1.2619) |
| size | 4.414 | 3.597 | 9.835 | 5.766 | 3.681 | 3.695 | 9.542 | 5.778 | 2.14 | .1394 | 6.82 | 2.254 | 2.272 | .9754 | 6.8213 | 3.417 |
| | (11.34) | (8.199) | (10.499) | (8.014) | (11.484) | (8.223) | (10.755) | (8.044) | (10.97) | (8.236) | (10.338) | (8.173) | (10.984) | (8.263) | (10.316) | (8.207) |
| incomp | -2.056 | 3.254 | .347 | 2.968 | -1.72 | 3.234 | .389 | 2.954 | -1.213 | 4.515 | .4647 | 4.2274 | -1.282 | 3.997 | .4454 | 3.511 |
| | (6.028) | (3.765) | (6.328) | (3.812) | (6.048) | (3.773) | (6.378) | (3.822) | (5.94) | (3.734) | (6.449) | (3.853) | (5.95) | (3.728) | (6.466) | (3.812) |
| cw | 2.360 | -.596 | -4.43 | -.845 | 2.889 | -.5140 | -4.05 | -.8305 | 4.036 | -12.215 | -1.56 | -11.244 | 3.895 | -8.427 | -1.561 | -6.743 |
| | (5.425) | (6.533) | (5.587) | (6.861) | (5.541) | (6.596) | (5.853) | (6.936) | (5.033) | (8.919) | (4.96) | (9.917) | (5.029) | (8.372) | (4.957) | (9.186) |
| democ | -14.67** | | -6.081 | | -15.1** | | -6.53 | | -15.53** | | -8.71 | | -15.68** | | -8.696 | |
| | (5.974) | | (6.709) | | (6.033) | | (6.87) | | (5.849) | | (6.439) | | (5.981) | | (6.525) | |
| lngdp | -1.433 | | -1.39 | | -1.445 | | -1.368 | | -1.535 | | -1.419 | | -1.508 | | -1.421 | |
| | (1.032) | | (.934) | | (1.039) | | (.9436) | | (1.0462) | | (.9623) | | (1.057) | | (.9702) | |
| milqual | -.0002 | | -.00005 | | -.0002 | | -.00004 | | -.0002 | | -.00004 | | -.0002 | | -.00004 | |
| | (.0003) | | (.00024) | | (.00027) | | (.00024) | | (.00027) | | (.00025) | | (.00027) | | (.00025) | |
| mountain | .0446 | | -.0433 | | .0407 | | -.0454 | | .0362 | | -.0473 | | .0372 | | -.0469 | |
| | (.087) | | (.081) | | (.0869) | | (.0814) | | (.086) | | (.0823) | | (.0879) | | (.0852) | |
| constant | 20.712 | | 21.19 | | 19.446 | | 20.518 | | 15.038 | | 17.731 | | 16.91 | | 17.73 | |
| | (12.53) | | (12.845) | | (12.605) | | (12.991) | | (14.795) | | (15.904) | | (14.34) | | (14.873) | |
| observations | 53 | 102 | 41 | 80 | 53 | 102 | 41 | 80 | 53 | 102 | 41 | 80 | 53 | 102 | 41 | 80 |
| R-squared | 0.3600 | 0.0811 | 0.3663 | 0.0702 | 0.3553 | 0.0805 | 0.3563 | 0.0692 | 0.3542 | 0.0905 | 0.3433 | 0.0850 | 0.3531 | 0.0803 | 0.3433 | 0.0727 |
| Adjusted $R^2$ | 0.2076 | 0.0332 | 0.1551 | 0.0073 | 0.2019 | 0.0326 | 0.1417 | 0.0063 | 0.2005 | 0.0432 | 0.1244 | 0.0231 | 0.1991 | 0.0324 | 0.1244 | 0.0101 |

\* $p<0.1$     \*\* $p<0.05$     \*\*\* $p<0.01$

Table 7.    Regression Results for Variables Based on GREG

| Testing hypothesis | H1a (local intermingling) | | | | | | | | H1b (regional intermingling) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Using data on | Area | | | | Population | | | | Area | | | | Population | | | |
| Including cases | All | | After 1964 | | All | | After 1964 | | All | | After 1964 | | All | | After 1964 | |
| Including variables | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO | All | EPR/PRIO |
| gregpracohab | -12.457 (21.662) | -11.074 (13.45) | -1.416 (17.041) | -5.53 (13.88) | | | | | | | | | | | | |
| gregprpcohab | | | | | -10.287 (17.086) | -2.918 (10.268) | 3.491 (13.295) | 5.806 (10.89) | | | | | | | | |
| gregea2 | | | | | | | | | 2.994 (11.111) | 6.238 (6.866) | -18.198 (10.792) | 5.424 (8.073) | | | | |
| gregep2 | | | | | | | | | | | | | -1.638 (11.65) | 5.707 (6.837) | -11.45 (10.35) | 6.974 (7.541) |
| statuscode | 4.0014** (1.638) | 2.328** (.98963) | 1.531 (1.55) | 1.666 (1.016) | 3.999** (1.637) | 2.327** (.995) | 1.554 (1.549) | 1.761* (1.017) | 4.03** (1.646) | 2.413** (.991) | 1.628 (1.413) | 1.744* (1.012) | 4.05** (1.659) | 2.37** (.989) | 1.712 (1.494) | 1.703* (1.006) |
| settletype | 2.379 (2.343) | 4.41*** (1.5084) | .997 (1.77) | 3.275** (1.577) | 2.201 (2.367) | 4.48*** (1.516) | 1.082 (1.789) | 3.437** (1.581) | 2.524 (2.39) | 4.669*** (1.508) | -.235 (1.772) | 3.51** (1.588) | 2.35 (2.398) | 4.571*** (1.502) | .21282 (1.841) | 3.522** (1.573) |
| size | 7.75 (12.657) | 2.279 (8.7806) | 10.729 (9.1662) | 2.718 (8.694) | 8.203 (12.55) | 2.407 (8.818) | 11.22 (9.05) | 3.581 (8.651) | 8.877 (12.58) | 2.056 (8.777) | 11.9 (8.209) | 2.39 (8.67) | 8.761 (12.6) | 1.785 (8.807) | 10.527 (8.618) | 1.95 (8.664) |
| incomp | .6062 (7.0008) | 8.46** (3.995) | -.843 (6.251) | 7.859* (4.1) | .226 (6.991) | 8.695** (4.046) | -1.122 (6.184) | 8.397** (4.121) | .1597 (7.079) | 8.501** (3.978) | -2.085 (5.655) | 8.13* (4.063) | .51 (7.088) | 8.506** (3.986) | -1.675 (5.943) | 8.065* (4.045) |
| cw | 5.346 (5.752) | | -.801 (4.75) | | 5.194 (5.776) | | -.5247 (4.833) | | 6.096 (5.946) | | -2.173 (4.404) | | 5.531 (5.866) | | -1.167 (4.563) | |
| democ | -10.797 (7.704) | | -7.167 (7.403) | | -11.098 (7.3799) | | -8.523 (7.036) | | -13.04* (6.672) | | -8.217 (5.442) | | -13.22* (6.803) | | -9.543 (5.991) | |
| lngdp | .5597 (1.444) | | .764 (1.022) | | .4494 (1.419) | | .7527 (1.016) | | .33387 (1.4483) | | .75 (.928) | | .4371 (1.448) | | .7742 (.976) | |
| milqual | -.0002 (.0003) | | -.0001 (.0002) | | -.00019 (.0003) | | -.00013 (.0002) | | -.00026 (.0003) | | -.00004 (.0002) | | -.0002 (.0003) | | -.00006 (.0002) | |
| mountain | .0942 (.124) | | -.0109 (.094) | | .0994 (.1268) | | -.0228 (.0956) | | .0692 (.121) | | -.0086 (.081) | | .0737 (.12) | | -.0255 (.086) | |
| constant | -7.076 (16.095) | -15.43** (6.923) | 2.128 (14.43) | -12.862* (7.578) | -5.432 (16.102) | -16.35** (7.11) | 2.237 (14.2782) | -15.3* (7.731) | -8.428 (17.9) | -21.99** (8.574) | 22.078 (17.551) | -18.783* (10.326) | -5.174 (18.12) | -21.25** (8.329) | 14.935 (17.866) | -19.84** (9.689) |
| observations | 35 | 75 | 25 | 56 | 35 | 75 | 25 | 56 | 35 | 75 | 25 | 56 | 35 | 75 | 25 | 56 |
| R-squared | 0.4402 | 0.2341 | 0.3785 | 0.1917 | 0.4410 | 0.2275 | 0.3812 | 0.1937 | 0.4342 | 0.2357 | 0.4832 | 0.1964 | 0.4330 | 0.2343 | 0.4282 | 0.2027 |
| Adjusted $R^2$ | 0.2070 | 0.1786 | -0.0654 | 0.1108 | 0.2080 | 0.1715 | -0.0607 | 0.1131 | 0.1985 | 0.1803 | 0.1140 | 0.1160 | 0.1967 | 0.1788 | 0.0197 | 0.1230 |

* $p<0.1$        ** $p<0.05$        *** $p<0.01$

Out of 32 regression models, the coefficients related to ethnic settlements have yielded no statistically significant results. Due to limitations of available datasets, tests of some models include data from only 25 observations out of 102, and thus their results can hardly be accepted as reliable. Their adjusted R-squared measures are very low. In both datasets, the highest pseudo $R^2$ is 0.2080, which is worse than the model that does not include the settlement data at all. The GREG models have on average better values of the adjusted R2 than the models in GeoEPR.

At the same time, among the variables borrowed from other sources, some factors have significant influence on conflict intensity. In GeoEPR, statuscode and democracy measures remain significant. The models that are not limited to conflicts after 1964, have significant negative impact of democracy on the intensity, and largest adjusted R2 values. The implications of these findings have already been discussed earlier.

In the GREG regressions, statuscode variable remains significant with positive sign, while Lacina's variables have little predictive power. The democracy variable, which is consistently significant in GeoEPR, is important only in two models based on the GREG data.

In addition, in the shorter models that include EPR/PRIO data, the settlement type and incompatibility type variables become important. The settlement type variable has positive sign, which means that the risk of more violent conflict increases for regional-urban groups, even more so for dispersed and aggregated groups. Incompatibility also has positive sign, which means that conflicts over issues related to government are more deadly than conflicts over territory only (separatism). It is interesting that these variables are significant only together with GREG data. These models have relatively high adjusted $R^2$ among all other models. Overall, EPR/PRIO data performs better with GREG than when tested separately. However, the pseudo-$R^2$ values in these models remain very low, ranging from 0.11 to 0.18 in GREG, and become even lower in GeoEPR.

## E.    CONCLUSION

Unfortunately, the statistical tests did not provide definitive results that would allow confirming or rejecting the hypotheses regarding ethnic settlement patterns and the intensity of violence in ethnic civil wars. It is not entirely clear whether poor results point to the non-relationship between the settlement patterns and the intensity of violence, or the deficiencies of existing data did not allow capturing that relationship. The available data at best could have captured only strategic-level features of the settlements, while the violence is always committed locally.

First, further research and data collection efforts are needed to obtain better and more fine-grained data on the intensity of ethnic conflicts. The intensity measure could include not only the estimates on battle related deaths, but other negative impacts of civil wars. Even the data on battle deaths may not be accurately collected because the host nation or independent sources may not report such data. Additionally, there are instances where it is virtually impossible to accurately codify casualties as either battle deaths, communal or one-sided violence.

Second, the data on settlement patterns used in the analysis is also lacking accuracy and satisfactory granularity, as it has been discussed earlier in this chapter. The approximation of ethnic boundaries and the simplification of the ethnic composition of particular regions may actually miss the exact factors that have an impact on conflict intensity—contested neighborhoods and the possible victims of inter-ethnic violence. Better measures of ethnic regional concentration and local cohabitation would arguably include village level data, cover entire globe, and be relevant to the time prior to the onset of hostilities.

Collection of such data presents its own challenges because the process may quickly become politicized, especially in conflict torn societies with high levels of

mistrust between groups, and even lead to the instigation of conflict.[179] Also, such systematic data may be used by political rivals to facilitate targeting opponents. As the ethnic conflicts continue to take human lives, there is an acute need to create more comprehensive and accurate account of ethnicities and their boundaries.

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179 For  example, consider the Illinden uprising in the Macedonia in 1903. The census organized by Ottoman Empire led to competition between Bulgaria, Greece and Serbia for forceful identification of local population as belonging to corresponding ethnicities, often contrary to the population's own desires (I. Yosmaoglu, "Counting Bodies, Shaping Souls: The 1903 Census and National Identity in Ottoman Macedonia," International Journal of Middle East Studies 38, no. 1 (2006): 55).

# VI.    CASE STUDIES

This chapter offers the analysis of four ethnic civil wars and uses this analysis to determine the causes of varying intensity of recorded violence in these conflicts. The two civil wars being analyzed that have low estimates of battle deaths are the Chittagong Hill Tracts (CHT) conflict in Bangladesh (1975–1997) and the Slovenian war for independence (1991). The two contrasting cases are the Sri Lankan Tamil insurgency (1984–2009) and the Bosnian civil war (1992–1995). The case studies will follow the method of structured comparison[180] to investigate the possible mechanisms that link particular configurations of ethnic settlements to more (or less) violent conflicts. The unit of analysis here is the ethnic civil war. The analysis will focus on five categories of evidence, as described in Chapter IV. These categories include indicators related to the central actors, the perpetrators, the victims, the environment, and the endogenous processes of civil conflicts.

The selection of cases was guided by the attempt to demonstrate sufficient variance of the dependent variable (taking into account both intensity and total number of battle deaths), while, at the same time, control for as many external factors as possible. All four cases represent conflicts that have ended or are not currently active. The cases were selected to cover different parts of the world, but preserve similarity within the dyads that are compared—the Chittagong Hill Tracts (CHT) and the Sri Lankan Tamils, and Bosnia and Herzegovina and Slovenia.

One of these similarities includes the fact that both Sri Lanka and Bangladesh are former British colonies that received their independence from the metropole almost simultaneously (although Bangladesh was a part of Pakistan until 1971). Most of the terrain where these conflicts occurred is covered with hills and jungles or scrub forest, with marine access (Sri Lanka) or close proximity to the sea (CHT) and waterways. Neither conflict resulted in the creation of new states. In both cases, certain subgroups

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[180] Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences* (Cambridge, MA: MIT Press, 2005), 67.

within the insurgency chose to cooperate with the government prior to the breakdown of the uprising. The conflicts for both groups were instances where the insurgents initially were fighting for the recognition (or restoration) of their political rights and preservation of cultural identity. Their demands eventually escalated to separatism, but the groups were defeated militarily and compelled to renounce (at least formally) their separatist goals. The level of economic development of the two countries in the first pair of cases is different—overpopulated and agrarian Bangladesh remains extremely poor, while Sri Lanka demonstrated steady growth of GDP even during the civil war.

The Bosnia and Herzegovina/Slovenia pair of cases also has many similarities. Both Balkan countries were members of Yugoslavia and thus shared many cultural and social features. Bosnia and Slovenia have quite similar geographic conditions, consisting primarily of mountainous terrain. The armed conflicts had clear separatist causes, and resulted in the creation of two new, independent states. In both cases, the conventional operations on the government side were largely conducted by the same forces—the Yugoslavian National Army (JNA). Again, as in the previous pair of cases, the level of economic development in the last two countries was markedly different even before the independence. Slovenia was the most developed part of the Yugoslavia, while Bosnia and Herzegovina were one of the most backward regions. It is noteworthy that the level of economic development in the dyads is associated with diametrically opposed outcomes of conflicts in terms of human cost: low economic development in Bosnia and high death tolls, and low economic development and low death tolls in Bangladesh.

Another important challenge for this analysis was selecting cases with a relatively similar amount of available information. It would be difficult to compare a large scale insurgency with a low profile case because the amount and quality of available data for each case would be different. There is always the risk that even the news media will tend to "over-report" on a more conspicuous civil war and "under-report" on a small-scale insurgency in remote areas, especially if the regime that is challenged by the insurgency is not transparent. The Bosnian and Slovenian cases are well documented, while the Sri Lankan government, at different points in the course of the conflict, attempted to limit

access of reporters to conflict zones and affected population. The Bangladesh case is the least familiar, and the government is alleged to have deliberately withheld information about the conflict.

Each case study will proceed in the following way: After outlining general information about the country and the conflict, the attention will be focused on the case-specific factors that explain the different intensity of violence in the conflict and their relationship to the hypotheses and mechanisms presented in this thesis. The third section in each case study will highlight the five classes of indicators that reveal additional information about the relationship between the ethnic settlements and intensity of civil wars.

## A.      CASE STUDY 1: THE CHITTAGONG HILL TRACTS

Table 8.      Country and Conflict Information

| General Country Information [181] | |
|---|---|
| Total area: | 143,998 sq km (94th largest in the world) |
| Total population: | 156,118,464 (July 2010 est., 7th largest in the world) |
| Ethnic composition: | Bengali 98%, other 2% (1998). According to the 1981 census, the thirteen indigenous tribes living in the Chittagong Hill Tracts (CHT) comprised approximately 900,000 persons. |
| General Conflict Information [182] | |
| Conflict name: | Bangladesh (Chittagong Hill Tracts) |
| Date of first stated goals of incompatibility: | 7 March, 1972 |
| Date when conflict reached 25 battle-related deaths: | 1 February, 1975 |
| Conflict status: | Terminated: 5 November, 1992 |
| Duration of hostilities (days): | 6488 |
| Total recorded battle deaths: | 1152 |

### 1.      Conflict Summary

The Chittagong Hill Tracts comprise the upland and are the least densely populated area in Bangladesh. It is the home of as many as thirteen diverse indigenous tribes. Until the 1960s, they enjoyed autonomous and protected status granted by the British colonial authority that made migration to the area virtually impossible.[183]

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[181] The Central Intelligence Agency, "CIA—the World Factbook," https://www.cia.gov/library/publications/the-world-factbook/index.html (accessed December 4, 2010).

[182]Uppsala Universitet, *UCDP Database*, Uppsala Universitet, http://www.ucdp.uu.se/gpdatabase/search.php (accessed October 22, 2010); *UCDP PRIO Battle Deaths dataset*, http://www.prio.no/CSCW/Datasets/Armed-Conflict/Battle-Deaths/ (accessed October 22, 2010).

[183] Syed Aziz-al Ahsan and Bhumitra Chakma, "Problems of National Integration in Bangladesh: The Chittagong Hill Tracts," *Asian Survey* 29, no. 10 (1989): 963.

In 1963, Pakistan's constitutional amendment abolished the area's autonomy. This move coincided with the completion of the Kaptai dam, which inundated up to 40% of cultivable land in the CHT, affecting about 100,000 persons.[184] In 1972, the new constitution of independent Bangladesh confirmed the abolition of the autonomous status and further opened the area for economic development and new settlers, causing gradual marginalization of the indigenous people.

Even before the Bangladesh constitution was formally adopted, the representatives of the tribes explicitly demanded restoration of their status, but the Bangladesh central government rejected their requests.[185] Despite cultural diversity, the tribes stood together to protect their rights against outside interference, forming the Chittagong Hill Tracts People's Coordination Association/Peace Force ("Parbattya Chattagram Jana Sanghati Samiti/Shanti Bahini," or PCJSS/SB). The Shanti Bahini (SB) became the major armed wing of the organization up until it was disbanded in 1997. The warfare was largely conducted in the CHT area. PCJSS/SB included several smaller factions, which had differing views regarding the conflict with the government. The indigenous tribes, in fact, represented the proto-ethnic group, which in the course of the struggle acquired a new common identity and started referring to themselves collectively as *jumma*.[186] The conflict has been virtually inactive since 1992, and on December 2, 1997 the sides officially signed the Peace Accords that recognized certain rights and privileges of the indigenous people and stopped (at least on paper) the migration of Bengalis into the region.

### 2.    The Major Factors Explaining Conflict Intensity

The conflict demonstrated low intensity of fighting—0.18 daily battle deaths, with the total number of battle-related deaths equally 1152 (Figure 3). However, some scholars questioned the accuracy of these reported numbers:

[184] Syed Aziz-al Ahsan and Bhumitra Chakma, "Problems of National Integration in Bangladesh: The Chittagong Hill Tracts," *Asian Survey* 29, no. 10 (1989), 964.

[185]Uppsala Universitet, *UCDP Database*.

[186] Mark Levene, "The Chittagong Hill Tracts: A Case Study in the Political Economy of 'Creeping' Genocide," *Third World Quarterly* 20, no. 2 (1999): 339–369.

Information on the Jummas and the conflict in the CHTs is frequently censored by government officials on the ground of 'national security.' The picture is further obscured by what could arguably be described as self-censorship by some of the Bangladeshi media and human rights groups.[187]
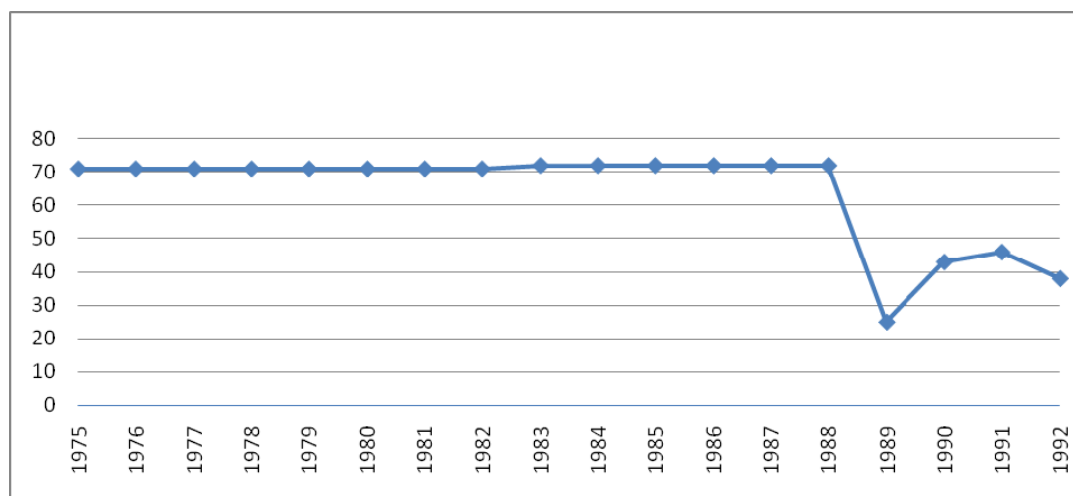


Figure 3.    The Intensity of the Chittagong Hill Tracts Conflict by Year

Alternative sources give the casualty estimates for the conflict to be as large as 25,000[188] or 125,000 fatalities since 1947.[189] In any case, the entire humanitarian impact of the conflict was much more substantial. The number of tribal refugees in the neighboring Indian Tripura reached 75,000 in the early 1990s. [190] Both sides are reported to have committed mass atrocities against unarmed populations, which are not taken into account as battle-related deaths.

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[187] Minority Rights Group, *War: The Impact on Minority and Indigenous Children* (London: MRG, 1997), 9. Additionally, other authors make the same point: Ahsan and Chakma, *Problems of National Integration in Bangladesh: The Chittagong Hill Tracts*, 959–970; Nazmul Hasan Chowdhury, "The Resistance Movement in the Chittagong Hill Tracts: Global and Regional Connections," *Asian Affairs* 28, no. 4 (2006): 36–51; Levene, *The Chittagong Hill Tracts: A Case Study in the Political Economy of 'Creeping' Genocide*, 339–369.

[188] Bangladesh Red Crescent Society, *Population Movement and the Chittagong Hill Tracts Development Programme,* International Federation of Red Cross and Red Crescent Societies, http://www.ifrc.org/Docs/pubs/disasters/resources/about-disasters/cs-bangladesh.pdf (accessed December 1, 2010).

[189] Levene, *The Chittagong Hill Tracts: A Case Study in the Political Economy of 'Creeping' Genocide*, 340.

[190] Uppsala Universitet, *UCDP Database*.

Prior to the conflict, the settlement pattern of the indigenous tribes was comprised of a single polygon with insignificant local intermingling (that is if the group of indigenous tribes is described as homogeneous (Figure 4)). The movement of Bengali settlers into the CHT area became one of the major causes for the indigenous population's decison to take up arms. Interestingly, the major shifts in population settlements occurred during the conflict. In 1951, the Bengali population in the CHT comprised 9% of the total population. In 1961, that number jumped to 12%, and in 1981 (after the beginning of the civil war) Bengalis comprised 40%[191] of the population.

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[191] Ahsan and Chakma, *Problems of National Integration in Bangladesh: The Chittagong Hill Tracts*, 966.
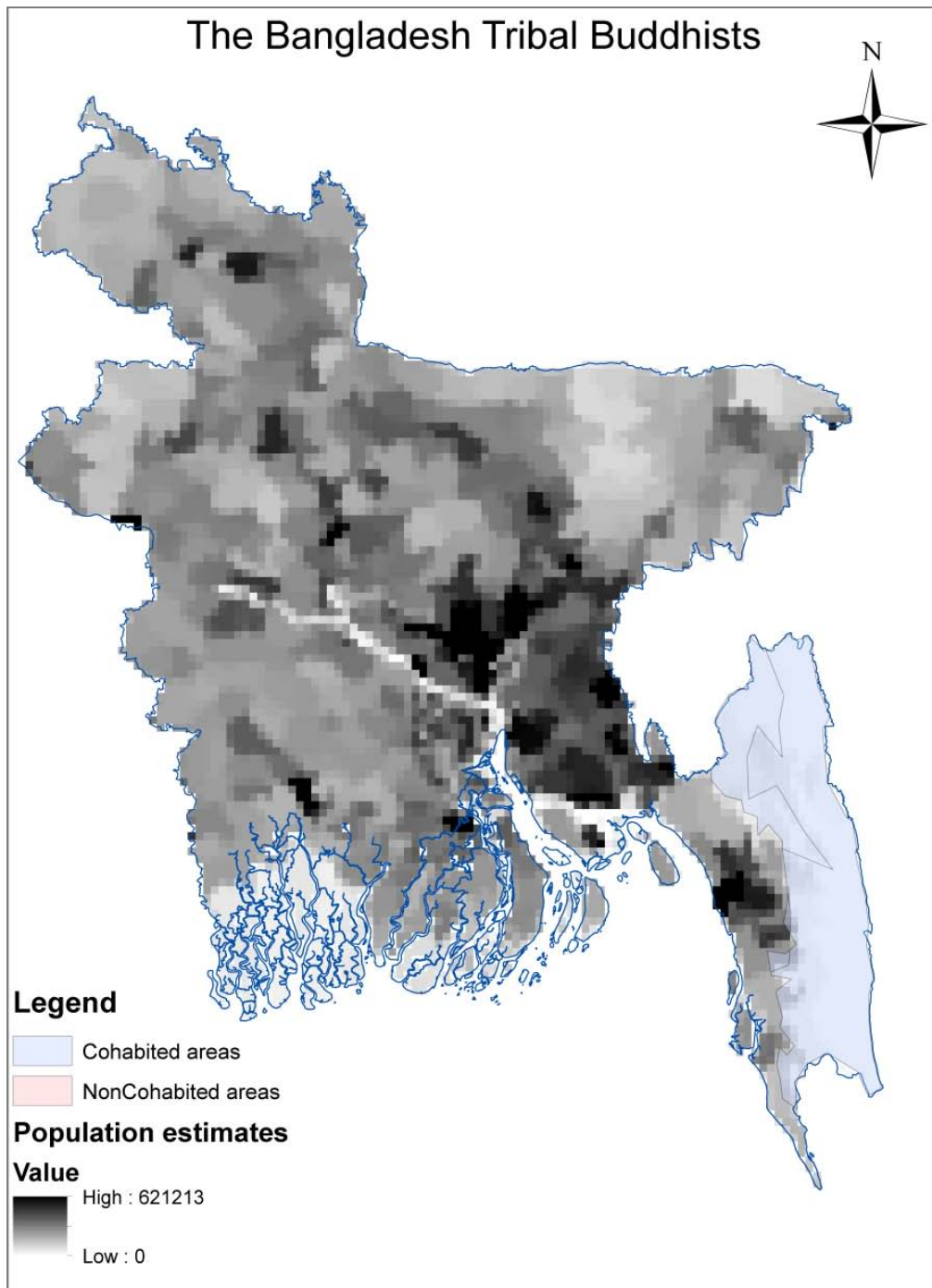
Figure 4.     The Ethnic Settlements of Indigenous Tribes in the Chittagong Hill
Tracts[192]

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By these standards, if the hypotheses posited in this thesis are correct, the intensity of violence should have been higher, as the indigenous population and the settlers were increasingly drawn into closer contact. However, certain intervening factors prevented significant escalation of hostilities. These factors include:

1. **The strategy of the population separation.** The government program of Bengali relocation into the CHT was conducted under direct supervision and strong protection from the military. All settlements were built close to one of several hundreds of military installations in the area. Additionally, as the clashes between the local population and the settlers intensified, the government initiated the relocation of the tribes into centralized villages (also guarded by the military) to destroy the scattered pattern of their dwellings.[193] Thus, neither settlers nor indigenous people represented an easily targeted, locally intermingled population that would trigger the mechanisms outlined earlier in this thesis.

2. **The concentrated Bangladeshi military presence in the area and huge disparity in military strength and manpower between the parties.**[194] The CHT tribes comprised only approximately one percent of the total population of Bangladesh, while they inhabited approximately 10% of the country's territory. During the conflict, about one-third of the Bangladeshi army was deployed in the area to fight the insurgency. Its total numbers, together with the paramilitaries, reached 90,000–115,000 troops so that there was "almost one soldier for every five or six tribals."[195] The estimates of the SB's strength were about 5,000[196] to 15,000[197] troops.

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[193] Chittagong Hill Tracts Commission and International Work Group for Indigenous Affairs, *'Life is Not Ours': Land and Human Rights in the Chittagong Hill Tracts, Bangladesh* (Copenhagen: Organizing Committee, Chittagong Hill Tracts Campaign, 1991), 17.

[194] Ahsan and Chakma, *Problems of National Integration in Bangladesh: The Chittagong Hill Tracts*, 970.

[195] Levene, *The Chittagong Hill Tracts: A Case Study in the Political Economy of 'Creeping' Genocide*, 354.

[196] Uppsala Universitet, *UCDP Database*.

[197] Chowdhury, *The Resistance Movement in the Chittagong Hill Tracts: Global and Regional Connections*, 44.

3. **Indiscriminate retaliatory tactics used by the military.** The entire indigenous population was viewed as "guilty" for the insurgent activities. "After every clash the military carried out ruthless oppression on unarmed villagers,"[198] causing increasing flows of refugees to the India's territory.[199] As predicted by the mechanisms, local Bengali militias and paramilitaries were instrumental in carrying out massacres and pogroms in the indigenous villages. There were also numerous reports of atrocities against the insurgents committed by regular units during combing operations.[200] However, as mentioned earlier, these attacks on the unarmed civilian population are not counted in the conflict intensity.

4. **The disagreement among the insurgency leaders regarding their strategic goals in the conflict.** The tribal resistance did not represent a unified front.[201] Among the smaller tribes, there was fear of the large Chakma tribe dominance.[202] What is even more important is that the leadership of the SB was divided between proponents of more violent confrontation (the Priti Kumar faction) and the moderates (led by Manobendra Larma) arguing for the "long protracted form of armed struggle to achieve autonomy within Bangladesh, not secede from it."[203] The major point of disagreement between the two factions was whether attacks on Bengali settlers were justified. After Priti's followers killed Larma, Manobendra's brother led the resistance and continued to follow Larma's restrained agenda. The movement essentially used Maoist logic of insurgency's gradual

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[198] Ahsan and Chakma, *Problems of National Integration in Bangladesh: The Chittagong Hill Tracts*, 968.

[199]Chowdhury, *The Resistance Movement in the Chittagong Hill Tracts: Global and Regional Connections*, 44.

[200] Chittagong Hill Tracts Commission and International Work Group for Indigenous Affairs, *'Life is Not Ours': Land and Human Rights in the Chittagong Hill Tracts, Bangladesh.*

[201] Uppsala Universitet, *UCDP Database.*

[202] Lukas Krienbuehl, *Peace with Power-Sharing: Under which Conditions?*, (Swisspeace, 2010), 22. http://www.swisspeace.ch/typo3/fileadmin/user_upload/pdf/Working_Paper/WP_1_2010.pdf.

[203] Chittagong Hill Tracts Commission and International Work Group for Indigenous Affairs, *'Life is Not Ours': Land and Human Rights in the Chittagong Hill Tracts, Bangladesh,* 18.

growth and protracted struggle. At the same time, the SB never entirely withheld from negotiating with the central authorities,[204] which may also explain the low intensity of fighting.

### a.    Indicators Related to Central Actors

The Bangladesh's government policy of settling the CHT did not directly include the goal for the physical elimination of the indigenous tribes, only of their assimilation.[205] In 1972, the Bangladeshi Prime Minister Mujib "advised the […] tribal leaders to forget their ethnic identities and merge with greater "Bengali" nationalism."[206]

As mentioned earlier, the major insurgency leaders did not encourage unrestrained targeting of Bengali settlers. The tribal leaders continued to work with the government system as much as against it,[207] and continued to identify with the Bangladesh state. As M.N. Larma mentioned, "you cannot impose your national identity on others. I am a Chakma, not a Bengali. I am a citizen of Bangladesh—Bangladeshi. You are also Bangladeshi but your national identity is Bengali. … They (tribals) can never be Bengali."[208]

### b.    Indicators Related to Perpetrators

Due to immense military presence, the perpetrators on the government side were mostly regular military or security forces. It is difficult to assess the ratio of regular to irregular forces; however, in the instances of mass violence against civilians, irregulars were acting together with the regular forces:

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[204] Uppsala Universitet, *UCDP Database*.

[205] Levene, *The Chittagong Hill Tracts: A Case Study in the Political Economy of 'Creeping' Genocide*, 344.

[206] Ahsan and Chakma, *Problems of National Integration in Bangladesh: The Chittagong Hill Tracts*, 967.

[207] Jane's Information Group, *Jane's*, http://www2.janes.com.libproxy.nps.edu/client/nps/ (accessed December 4, 2010).

[208] As cited in Ahsan and Chakma, *Problems of National Integration in Bangladesh: The Chittagong Hill Tracts*, 968.

> Following the killings of non-tribal people by the Shanti Bahini in April 1986, reprisals had taken place against the tribal people. […] The security forces had been unprepared for the sudden escalation of violence that occurred, and were unable to contain the strong emotions aroused at the time. […] It was acknowledged that elements of the security forces – for example junior personnel of the paramilitary or volunteer units – may have assisted in the reprisals in so far as they provided active support to the actions of the non-tribal people.

This account also exemplifies the extent to which the central authorities sanctioned or controlled the violent actions of the immediate perpetrators.

The insurgents were organized within the Maoist tradition into clandestine regional networks, and enjoyed a high degree of local support. The SB had limited access to arms and external assistance. It is claimed that India may have provided logistics and training for the rebels, and they may have had camps on the Indian and Burmese territories.

### c. Indicators Related to Victims

The victims of government actions included large numbers of the peaceful population. While exact figures are missing, the number of refugees that fled the area indicates that indiscriminate coercive methods were used liberally.

Initially, the SB attacked only military targets, but later started targeting Bengali settlers as well. However, as the local population on both sides became increasing victimized, the government made extensive efforts to physically separate the tribesmen and the settlers.

### d. Indicators Related to Environment

The CHT area was sparsely populated. This fact, along with the inaccessibility of terrain, represented certain advantages for the low-intensity Maoist type of insurgency. However, the governmental development project (e.g., building all-season

roads) allowed the military to control the area more effectively. The proximity of international borders allowed large numbers of the indigenous population to escape violence.

### e. Indicators Related to Endogenous Processes of Civil War

The conflict experienced gradual escalation which culminated in 1980, when 17,000 villagers crossed the Tripura border, and then in 1986, when the inter-communal riots saturated the area. Interestingly, these escalations are not in any way reflected on the graph of annual battle deaths (Figure 3). Unfortunately, this absence of information needs further inquiry that is outside the scope of this thesis. These escalations resulted in the government launching the resettlement programs for the tribal groups in an attempt to uproot the insurgency. In general, the conflict did not experience periods of intense escalation of combat activity. The insurgents controlled the rural areas, but were unable to launch effective attacks because of a disparity in strength and because it immediately exposed villagers to reprisals.

### 3. Conclusion

The first case study demonstrated, the opportunity and organizational mechanisms outlined in Chapter IV are not profound in this conflict, despite the increasingly favorable conditions for the mechanisms to manifest themselves. It is explained by several reasons. The Bangladeshi armed forces had an overwhelming military and numerical advantage over the insurgents. Due to the army's effective protection of settlers and indiscriminate retaliatory tactics, the insurgents could not mount an effective resistance or attack "soft" targets. At the same time, the proximity of the Bangladesh border with India allowed many tribe members to escape the violence. The insurgent's leadership made a strategic choice to fight for recognition within the Bangladesh state and not for the outright separation, while the government's major goals were assimilation, not elimination, of tribes and allocation of Bengal settlers. However, growing local and regional

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intermingling of Bengali settlers and indigenous tribes, along with the demilitarization of the CHT territories increases the risk that if the conflict escalates to a civil war in the future, the amount of violence (in any of its forms) will be significant.

## B.    CASE STUDY 2: THE SRI LANKAN TAMILS

Table 9.    Country and Conflict Information

| General Country Information[209] | |
|---|---|
| Total area: | 65,610 sq km (121th largest in the world) |
| Total population: | 21,513,990 (July 2010 est., 55th largest in the world) |
| Ethnic composition: | Sinhalese 73.8%, Sri Lankan Moors 7.2%, Indian Tamil 4.6%, Sri Lankan Tamil 3.9%, other 0.5%, unspecified 10% (2001 census provisional data) |
| **General Conflict Information[210]** | |
| Conflict name: | Sri Lanka (Eelam) |
| Date of first stated goals of incompatibility: | 14 May, 1976 |
| Date when conflict reached 25 battle-related deaths: | 10 September, 1984 |
| Conflict status: | Terminated: 19 May, 2009 |
| Duration of hostilities (days): | 7633 |
| Total recorded battle deaths: | 76807* |

* This number includes the battle death estimates only for the years 1984 through 2008.

### 1.    Conflict Summary

After Sri Lanka received independence from Great Britain in 1948, the island witnessed steady growth of nationalism that blended the ideas of Sinhalese supremacy and Buddhist religiousness into increasingly violent ideology, and eventually became a major source of concern for local ethnic minorities, essentially triggering separatist sentiments among Tamils.[211] The two ethnicities coexisted more or less peacefully until

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[209] The Central Intelligence Agency, "CIA—the World Factbook," https://www.cia.gov/library/publications/the-world-factbook/index.html (accessed December 4, 2010).

[210] Uppsala Universitet, *UCDP Database*; *PRIO Battle Deaths dataset*.

[211] Uppsala Universitet, *UCDP Database*.

the twentieth century,[212] when the Sinhalese religious nationalism and Tamil separatism had galvanized Sri Lanka and segmented the society into ethno-religious groups that for decades fought a bitter and increasingly bloody civil war. The Tamil minority interpreted changes to the constitution in 1971, and later consolidation of presidential power, as a threat to their interests. In turn, Tamil protests were interpreted by Sinhalese as a threat from a much larger ethnic community that included Tamils in India.[213] Spirals of public unrest, violent attacks and inter-communal violence culminated in 1983's Black July, which marked the "official" start of the Tamil separatist campaign.[214] The Liberation Tigers of Tamil Eelam (LTTE) became the major insurgent organization that challenged Sri Lankan authority and violently eliminated any rivals to its claim of being the exclusive representative of the Sri Lankan Tamils.

The insurgency underwent several phases of intensified fighting. Despite numerous attempts to negotiate a cease-fire, the hostilities hardy ever stopped. Large portions of the island in the East and North were under insurgents' control, where they established courts and security apparatuses, and collected taxes. The critical source of funding for the insurgency had been the large Tamil Diaspora that emerged in North America and Western Europe after the ethnic violence erupted on the island in the mid-1980s. The counter-terrorist financing efforts taken on the international level after 2001 had an adverse effect on the availability of support for the organization. By 2009, the government forces managed to exhaust the LTTE and finally defeated the rebel organization militarily.

### 2. The Major Factors Explaining Conflict Intensity

Unlike the CHT conflict, international media had more access to the information about the conflict, despite the fact that at certain points the Sri Lankan government tried

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[212] David Little, *Sri Lanka: The Invention of Enmity* (Washington, DC: United States Institute of Peace Press, 1994), 11.

[213] Mark Juergensmeyer, *The New Cold War?: Religious Nationalism Confronts the Secular State* (Berkeley: University of California Press, 1993), 100.

[214] Ibid., 102.

to limit such access. The recorded intensity of violence in the Tamil civil war was 10.06 daily battle deaths (excluding the endgame of the conflict in 2009), with an enormous total death toll estimated at 76,807 lives (Figure 5).
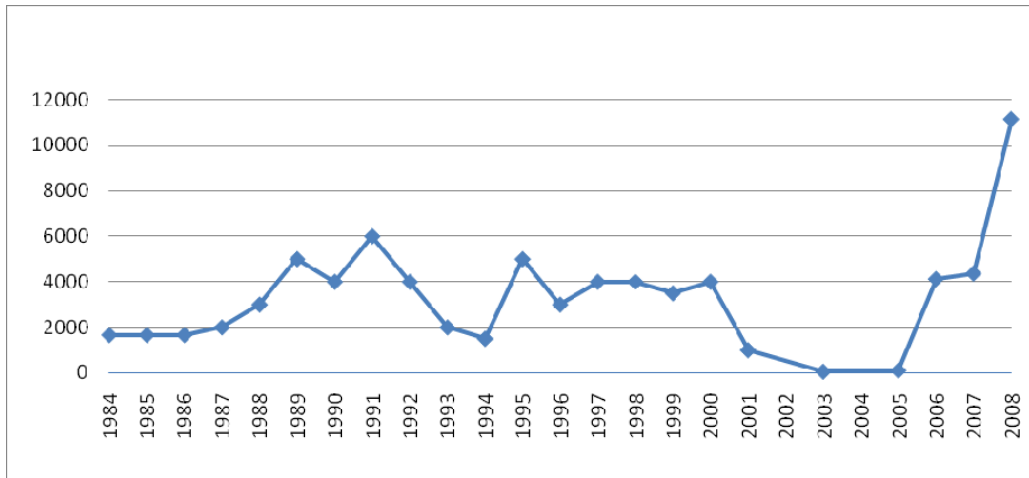


Figure 5.    The Intensity of the Sri Lankan Tamil Conflict by Year

The final stage of the civil war in May 2009 was extremely bloody. According to the UCDP,

> On 15 May, the UN estimated that about 7000 civilians had been killed in the fighting between 20 January and 7 May. The Times claimed on 30 May that according to unreleased UN documents, the figure had risen to 20 000 by 19 May. According to The Times, 13 000 of these had been killed in May alone. […] Throughout the period of fighting in 2009, the government banned all journalists from the conflict zone and only allowed ICRC to work in the area. UN and other aid agencies were eventually given restricted access to the government camps for displaced Tamils, which came to hold up to 280 000 civilians.[215]

According to the GeoEPR and GREG, the settlement patterns of the two ethnic groups comprised numerous islands of heterogeneous population. Substantial local and regional intermingling can be observed on the Sri Lankan ethnic map (Figure 6). The question then arises, what effect (if any) did ethnic settlement patterns have on the conflict intensity?

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[215] Uppsala Universitet, *UCDP Database*
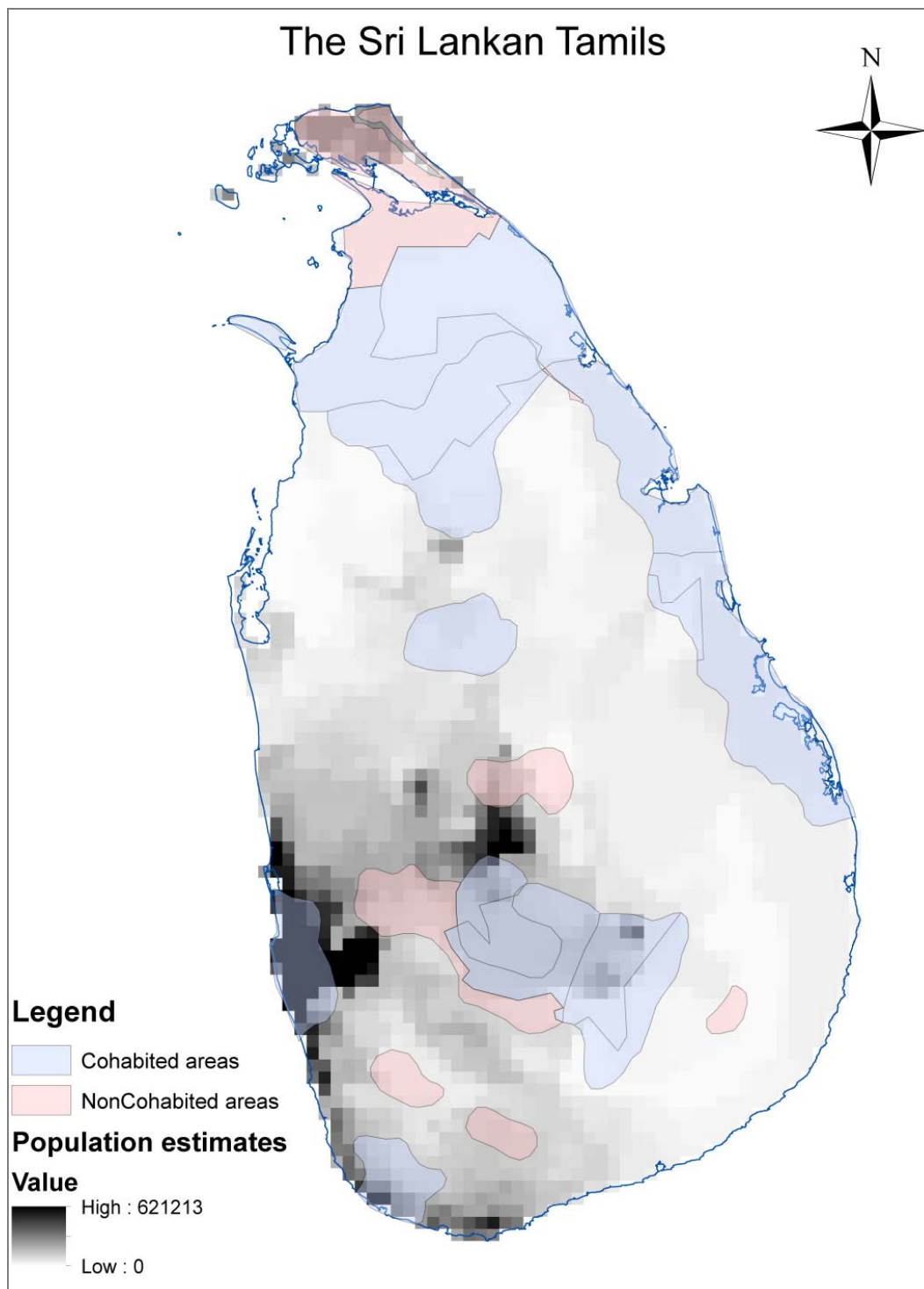
Figure 6.    The Ethnic Settlements of Tamils in Sri Lanka [216]

[216] Map created using ESRI ArcGIS software. http://www.esri.com/

A large portion of LTTE's operations had a more conventional and organized, rather than irregular and decentralized, character. There is no accurate measure of the proportion of attacks that involved small enclaves of population versus those that were conducted against the larger pockets of ethnic kin (thus, it is difficult to determine whether the mechanisms that have been specified in this thesis are at work). However, it is definite that the intermingled character of ethnic settlements had a profound impact on the overall dynamics of the conflict.

First, the conventional strength of LTTE (and its ability to inflict and sustain casualties) derived from the donations of the large and wealthy Tamil Diaspora living in the West.[217] The availability of funding and support allowed LTTE to invest heavily in the smuggling of arms, the training of its troops, discipline, and its command and control function, as well as its ability to recover quickly after major confrontations with the government. The Diaspora emerged as a direct result of ethnic cleansing and indiscriminate violence against the Tamils in areas of ethnic cohabitation in the early years of the conflict in the 1970s and mid-1980s. The manner in which the Diaspora formed suggests a high level of motivation to assist in confronting the Sinhalese nationalist agenda. Therefore, it may be argued that because of the intermingled character of ethnic settlements of the Sinhala and Tamils, the interethnic conflict resulted in a large exodus of the Tamil population, which later became a major contribution to the military strength of the insurgency, and increased intensity of violence in this civil war.

Second, the insurgent control was concentrated in the Eastern and Northern parts of the island, where the Tamil population was in majority. Although the insurgents controlled large portions of the territory, this control has never been too firm. The Sri Lankan Army (SLA) frequently regained control of different parts of the island under insurgent control. The territories that fell under Tamil control were ethnically cleansed of

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217 Uppsala Universitet, *UCDP Database*; Jane's Information Group, *Jane's*.

Sinhala and Muslims.[218] The SLA, in its turn, detained large numbers of Tamils alleged in siding with the insurgency in the IDP camps,[219] where numerous human rights violations have been recorded.

Third, local insurgent commanders did not always follow orders and violent clashes between the factions within the insurgent organization were frequent. One of the most well known examples is the 2004 Karuna split that led to internecine fighting and confusion among insurgents that was aptly exploited by the government.[220] However, it is unclear from the existing accounts about the insurgency whether the unstable connections between local areas under insurgent control impeded in ensuring firm discipline.

In addition, numerous rival organizations had suffered from LTTE's ambitions to be the sole voice of the Sri Lankan Tamils. The internal opposition or alternative movements with the Tamil community were ruthlessly wiped out. The violent reaction to any signs of dissent within its own ranks was also one of the characteristic features of the LTTE.

Finally, there were many civilian casualties during the conventional operations. Both sides opened fire (including artillery bombardments) on residential areas during the battles.[221] The LTTE is reported to have used human shields and kept the local population as hostages during their defensive operations. As mentioned earlier, the number of civilians caught in the cross-fire during the final stages of the war was especially high. However, it is difficult to establish whether the decision to use such tactics leading to substantial collateral damage was dictated or affected by the fact that probable casualties would largely include the representatives of the "ethnic enemy" population.

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[218] Sankaran Krishna, *Postcolonial Insecurities: India, Sri Lanka, and the Question of Nationhood* (Minneapolis, MN: University of Minnesota Press, 1999), 177.

[219] Uppsala Universitet, *UCDP Database*.

[220] In March 2004, the LTTE's military leader in the Eastern provinces "Colonel" Karuna separated from the main organization with a large number of LTTE's cadres from that region, undermining its image as the only legitimate representative of the Sri Lankan Tamils. Many representatives of the Karuna faction ended up cooperating with the government and providing intelligence on the LTTE. Uppsala Universitet, *UCDP Database*.

[221] Jane's Information Group, *Jane's*.

### a. *Indicators Related to Central Actors*

Sinhalese nationalism emphasized exclusive national identity and most of the riots and initial violence was directed at Tamils holding higher positions in the society, or living in urban areas where ethnicities were intermingled on a local scale. The Tamils' demands progressed from recognition to separatism, focusing on areas in the East and North where the ethnicity constituted the majority.[222]

The central command of the LTTE did not always exercise control over its forces despite its unusually high level of general discipline compared to other insurgent movements. The leadership on both sides of the confrontation defined the conflict in broad terms: the threat that the Tamils represented to the Sinhalese national identity was portrayed to include the Tamil Nadu, while the LTTE viewed radical Sinhalese nationalism as an irresolvable problem to their cultural distinctiveness.

### b. *Indicators Related to Perpetrators*

Both the LTTE and Sinhalese nationalists made extensive use of violence against ethnic "others" and dissenting elements within their own ranks:

> The late 1970s and early 1980s saw the formation of several armed separatist groups. Apart from LTTE, TELO (Tamil Eelam Liberation Organisation) and EPRLF (Eelam People's Revolutionary Liberation Front) are notable, but intense intra-factional fighting in the 1980s virtually destroyed the more inexperienced and undisciplined challengers to LTTE hegemony.[223]

Even after the LTTE achieved the monopoly on "Tamil violence," the organization continued to suffer from internal rivalries and the territorial commanders did not always follow orders.[224]

The LTTE's organization and the order of battle were similar to the conventional army, with its own naval forces, reconnaissance and engineer troops, etc.

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[222] Uppsala Universitet, *UCDP Database*.

[223] Uppsala Universitet, *UCDP Database*.

[224] Jane's Information Group, *Jane's*.

The LTTE used a vast variety of conventional and irregular tactics, including hit-and-run attacks, IED explosions, abductions and assassinations, and large-scale offensives. The SLA's tactics also included both conventional and counterinsurgency operations. Conventional operations were often conducted in areas with large and heterogeneous civilian populations, leading to significant collateral damage. Numerous war crimes were documented on both sides. The International Crisis Group reported allegations that the SLA was guilty of the intentional shelling of civilians, hospitals and humanitarian operations, while the LTTE was accused of intentional shooting and injuring of civilians who attempted to flee the conflict area.[225]

### c.      Indicators Related to Victims

The victims of battlefield operations included large numbers of civilians caught in cross fire. The victims of pogroms and inter-communal riots supplemented the casualties from the military operations in this conflict. Ultimately, the government was accused of ignoring the mass killings of civilian Tamil population.

As it was mentioned earlier, the casualties of the conflict included many Sinhalese and Muslim victims of the LTTE's ethnic cleansings in the Northern provinces. The victims of insurgents included the ethnic "others" and those considered traitors of the nationalist cause. It is also argued that the LTTE is actually guilty of killing more Tamils than the government.[226]

### d.      Indicators Related to Environment

Most of the territories where the clashes occurred belonged to ethnically heterogeneous areas, which arguably aggravated the violent effects of the insurgency. The Sri Lankan geography is comprised of mountainous and hilly terrain with scrub forest. This is where the LTTE built numerous defensive fortifications. However, it is unclear to what extent the terrain affected casualty figures in this case.

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[225] International Crisis Group, "War Crimes in Sri Lanka," *International Crisis Group*, http://www.crisisgroup.org/~/media/Files/asia/south-asia/sri-lanka/191%20War%20Crimes%20in%20Sri%20Lanka.ashx (accessed December 1, 2010).

[226] Krishna, *Postcolonial Insecurities: India, Sri Lanka, and the Question of Nationhood*, 222.

*e.*       ***Indicators Related to Endogenous Processes of Civil War***

Despite the numerous attempts to achieve a negotiated solution, the peace talks were wrecked by continued uncontrolled violence. As stated in the UCDP dataset, "In the north the LTTE fought a largely conventional war against the armed forces, while it pursued a guerrilla insurgency strategy in the east, which was combined with a bombing campaign against political and economical targets in the south."[227] There conflict was marked by numerous shifts of control over the areas claimed by the insurgents. The war also underwent numerous escalations and phases of intensified violence, which increased the gravity of conflict for the Sri Lankan society.

**3.       Conclusion**

The second case study demonstrated how highly mixed character of ethnic settlements of Tamils and Sinhalese had aggravating effect on the overall intensity of the civil war. The LTTE enjoyed extensive support from rich Diaspora that was formed after ethnic clashes resulted in a large exodus of Tamils from Sri Lanka. The motivation mechanism explains why the insurgents were cleansing East and North of the island of Sinhala and Muslims after they were able to consolidate control over these areas. Both the government and rebels were guilty of the extensive use of indiscriminate violence against ethnic others in the conflict areas under their control, as well as of employing tactics that led to large collateral civilian deaths. Partially, these actions can be attributed to deliberate choice of actors to victimize "ethnic others" and part to unstable control of the central actors over the actions of peripheral commanders.

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[227] Uppsala Universitet, *UCDP Database*.

## C.    CASE STUDY 3: THE SLOVENIAN WAR FOR INDEPENDENCE

Table 10.    Country and Conflict Information

| General Country Information [228] | |
|---|---|
| Total area: | 20,273 sq km (154th largest in the world) |
| Total population: | 2,003,136 (July 2010 est., 145th largest in the world) |
| Ethnic composition: | Slovene 83.1%, Serb 2%, Croat 1.8%, Bosniak 1.1%, other or unspecified 12% (2002) |
| **General Conflict Information** [229] | |
| Conflict name: | Yugoslavia (Slovenia) |
| Date of first stated goals of incompatibility: | 1 September, 1989 |
| Date when conflict reached 25 battle-related deaths: | 28 June, 1991 |
| Conflict status: | Terminated: 4 July, 1991 |
| Duration of hostilities (days): | 9 |
| Total recorded battle deaths: | 63 |

### 1.    Conflict Summary

The Republic of Slovenia was the first to become an independent state during the collapse of Yugoslavia. The independence of Slovenia was proclaimed on June 25, 1991 by the pro-independence leader Milan Kucan. Shortly afterwards, the Yugoslavian National Army (JNA) began fighting with  the Slovenian territorial defense (TO) forces. According to sources, "International mediation was launched almost immediately and eventually led to the signing of the Brioni peace agreement. Despite problems with the implementation, the conflict did not resume and Slovenia became an independent state in 1992."[230]

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[228] The Central Intelligence Agency, *CIA—the World Factbook.*

[229] Uppsala Universitet, *UCDP Database*; *PRIO Battle Deaths dataset*.

[230] Uppsala Universitet, *UCDP Database*.

Prior to the outbreak of hostilities in 1990 and early 1991, Slovenia was able to consolidate control over the territorial defense (TO) forces by ousting the officers who were loyal to Belgrade and directing its share of conscripts to serve in units located on Slovenian territory. It did all this while attempting to transform the TO into a standing army.[231] Within a few days after the declaration of independence, Belgrade mobilized to full combat alert the JNA units stationed in Slovenia, and took the border crossings in the dissenting republic. The Slovenian TO, together with the loyal police force, struck back and "a number of JNA helicopters were shot down on the first day of the armed conflict, resulting in several casualties."[232]

The Slovenian TO forces were significantly weaker than the JNA units, but they were more motivated. They made extensive use of guerrilla tactics, which they directed against the Yugoslav army units and "as for the Yugoslavian government, it seemed at times unclear whether it controlled JNA officers and whether it had authorized JNA to use force or not."[233]

The international community almost immediately initiated negotiations between the different sides of the conflict. The ceasefire was reached relatively quickly despite initial unsuccessful attempts.[234] According to the UCDP Database, "the [final peace] agreement, which was signed on 12 July, provided for an immediate cessation of the hostilities. […] The agreement also stated that during the three months, Slovenian police would be allowed to control the republic's international borders, while the JNA would be in charge of security."[235]

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[231] United States and Central Intelligence Agency, *Balkan Battlegrounds: A Military History of the Yugoslav Conflict, 1990–1995* (Washington, DC: Central Intelligence Agency, Office of Russian and European Analysis, 2002–2003), 51.

[232] Uppsala Universitet, *UCDP Database*.

[233] Uppsala Universitet, *UCDP Database*.

[234] Uppsala Universitet, *UCDP Database*.

[235] Uppsala Universitet, *UCDP Database*.

## 2. The Major Factors Explaining Conflict Intensity

PRIO recorded the intensity of violence for this conflict as 7 daily battle deaths, which is almost as high as the Tamil insurgency. This case reveals the limitations of the intensity measure, since the overall violent impact of the Slovenian civil war is minor compared to the civil wars in Sri Lanka or Bosnia. Only 63 people died in combat, which is a surprisingly low number compared to the later "divorces" that Slovenia's neighbors had with Yugoslavia.

Three major aspects differentiate Slovenia from other former Yugoslavian political entities. First, it was the most economically developed region in Yugoslavia.[236] Second, it is almost entirely ethnically homogeneous (Figure 7). Unlike the CHT, where ethnic minorities also comprise a comparatively low percentage, but are concentrated in one contiguous area, in Slovenia it is difficult to pinpoint distinct ethnically homogeneous regions belonging to minorities. The territorial defense forces, which in Bosnia became the human resource for all sides in the conflict because of their ethnic heterogeneity, were almost completely homogeneous in Slovenia. Third, Slovenia was the first to leave the Yugoslavian federation and Belgrade was confused as to how to respond to the republic's audacious declaration of independence; an extensive military solution to the political problem was too risky and inappropriate.

The Yugoslavian army (JNA) did not have the local support in this conflict, since the overwhelming majority of the population belonged to Slovenian ethnicity. Additionally, there was no imminent threat to a large number of ethnic kin from the possible actions of the Slovenian separatists. The possible "ethnic targets" for the Slovenian TO were few, while the JNA deployed into battle ten times fewer troops than the TO did, and thus were on the defensive almost the entire conflict.[237]

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[236] United States and Central Intelligence Agency, *Balkan Battlegrounds: A Military History of the Yugoslav Conflict, 1990–1995*, 49; Uppsala Universitet, *UCDP Database*.

[237] United States and Central Intelligence Agency, *Balkan Battlegrounds: A Military History of the Yugoslav Conflict, 1990–1995*, 69.
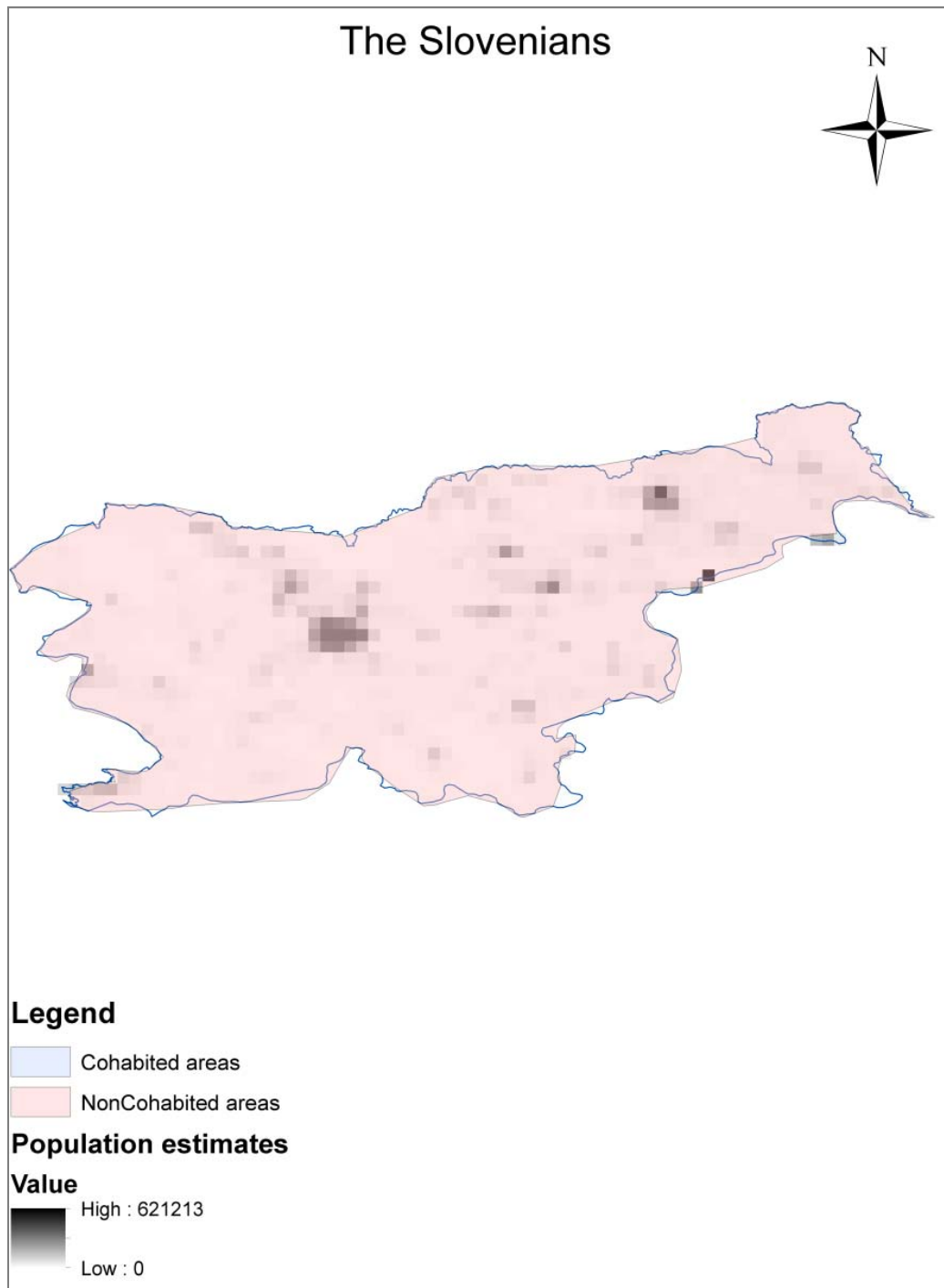
Figure 7.    The Ethnic Composition of Slovenia[238]

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[238] Map created using ESRI ArcGIS software. http://www.esri.com/

### a.    Indicators Related to Central Actors

The central actors in Belgrade were viewing this conflict as a constitutional crisis and a threat to the integrity of Yugoslavia. At the same time, other members of the federation were increasingly expressing their dissatisfaction, which included the ethno-nationalist dimension, and the Slovenian claims for independence were perhaps the most "legitimate" in the Belgrade's eyes and easy to settle. It was difficult to argue against the option of national self-determination in the case of homogeneous Slovenia.

Slovenia, on the contrary, was highly motivated to achieve its goal of independence. Since it had been obvious from the outset that the major battlefields would be located on its territory, which was almost exclusively inhabited by Slovenes, Ljubljana and loyal armed forces were compelled to use tactics that would reduce possible casualties (for example, they abstained from shelling residential areas).

Quick international attention to the problem also decreased the likelihood that either side of the conflict would be willing to escalate its force. From the diplomatic standpoint, there were also few alternatives to Slovenia's independence from the deteriorating federation.

### b.    Indicators Related to Perpetrators

In this conflict, irregular forces attacking small enclaves of enemy population were not observed. The battles were largely conducted between JNA on the one side, and the TO and police forces on the other. Slovenia's forces used guerilla tactics to compensate for their inferior military capabilities and they limited their targets to the opponent's military forces. The local civilians built barricades and engaged in public protests, but for the most part, they did not participate in combat action.

On some occasions, the JNA used tactics that were dangerous for both military and civilian targets (cluster bombs), but such use did not have a systematic or widespread character. Importantly, the JNA units, which included some Slovenians, were not motivated to attack.[239] The TO and other forces loyal to Ljubjana were not perceived by JNA members as a threat to their ethnic kin.

### c.      Indicators Related to Victims

Overall, the enclaves of the ethnically heterogeneous population that would represent either easy-to-attack or hard-to-protect targets were practically absent in the conflict. There were few ethnic "others" that the Slovenian military could associate the JNA with, or that could be viewed as a "fifth column" or impediments to Ljubljana's territorial and political control. The victims in this conflict were mostly limited to military targets; the civilian population did not directly participate in the conflict as victims, except for the truck drivers that deliberately blocked the movements of the JNA's columns on several occasions.[240]

### d.      Indicators Related to Environment

The level of economic and infrastructural development and urbanization in Slovenia is higher than in Bosnia and Herzegovina, with a larger proportion of the population living in cities. Additionally, the geographic environment in Slovenia is similar to Bosnia. The Slovenian TO forces were able to use the advantages of the terrain to attack the JNA forces (for example, blocking the movement of large columns of military vehicles in choke points).

### e.      Indicators Related to Endogenous Processes of Civil War

There were no spirals of escalation or revenge and retaliatory attacks during this short war. The conflict quickly deescalated, as the sides were able to reach a

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[239] United States and Central Intelligence Agency, *Balkan Battlegrounds: A Military History of the Yugoslav Conflict, 1990–1995*, 63.

[240] Ibid.

negotiated agreement. After the peace agreement was reached, JNA forces gradually left Slovenian territory without violence. During the war, there were no major or numerous changes of territorial control between the warring parties.

### 3.    Conclusion

This third case study indicated that Belgrade was not determined to prevent Slovenia from secession. In Slovenia, there were no ethnic communities or symbols important for the integrity of Serbian ethnic identity that required protection, as in the cases of Bosnia or Kosovo. The Slovenian territory almost entirely belonged to the Slovenian ethnic group, and legitimacy of its claims to secession was perhaps the most acceptable among the demands of all the federal entities. The low intensity of this war can be also explained by the Slovenian forces' absence of ethnic targets and the numeric superiority of the TO that did not allow JNA to advance large-scale offensive operations. The absence of an ethnically different and weakly protected population made it impossible for the conventional fighting to "spill over" into the inter-communal clashes, and vice versa. Thus, there are few, if any, indications of the specified motivation and organizational mechanisms to be present in this civil war.

## D.    CASE STUDY 4: BOSNIA AND HERZEGOVINA

Table 11.    Country and Conflict Information

| General Country Information [241] | |
|---|---|
| Total area: | 51,197 sq km (128th largest in the world) |
| Total population: | 4,621,598 (July 2010 est., 120th largest in the world) |
| Ethnic composition: | Bosniak 43%, Serb 31%,  Croat 17%, other 9% (1991)[242] |
| | Bosniak 48%, Serb 37.1%, Croat 14.3%, other 0.6% (2000) |
| General Conflict Information [243] | |
| Conflict name: | Bosnia and Herzegovina (Serb) |
| Date of first stated goals of incompatibility: | 1992 |
| Date when conflict reached 25 battle-related deaths: | 30 April, 1992 |
| Conflict status: | Terminated: 21 November, 1995 |
| Duration of hostilities (days): | 1300 |
| Total recorded battle deaths: | 44800 |

### 1.    Conflict Summary

Yugoslavia could have been a success story of peaceful ethnic coexistence and cooperation between communist and capitalist worlds. Instead, after the collapse of the communist regime, a tsunami of ethnic violence destroyed the existing social structures and bankrupted the nascent Yugoslav national identity. In 1992, the declared independence of Bosnia and Herzegovina provoked fears of minority status among the Bosnian Serbs and was used by extreme nationalist Croat and Serb elements to attempt a partitioning of the country.[244] This confrontation rapidly escalated into one of the bloodiest civil wars of all time. Bosnian Serbs and Croats declared the creation of two

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[241] The Central Intelligence Agency, *CIA—the World Factbook*.

[242] Uppsala Universitet, *UCDP Database*.

[243] Ibid.; *PRIO Battle Deaths dataset*.

[244] Jasminka Udovicki and Ejub Stitkovac, "Bosnia and Herzegovina: The Second War," in *Burn this House: The Making and Unmaking of Yugoslavia*, eds. Jasminka Udovicki and James Ridgeway (Durham, NC: Duke University Press, 1997), 174.

independent entities on the Bosnian territory, the Republika Srpska and the Herzeg-Bosna, in the areas where they had an ethnic majority. Additionally, "in north-western Bosnia a rebellious member of the Bosnian state presidency formed an autonomous region (the Autonomous Province of Western Bosnia), and fought the government between 1993 and 1995."[245] In this conflict, numerous loosely organized, irregular groups played a decisive role in combat operations and the perpetration of violence along with the regular forces.[246]

For the most part, local communities in Bosnia and Herzegovina were able to coexist peacefully for decades without attaching great practical importance to a distant violent past, and they did not support violence.[247] Locals, who were arming themselves and organizing into militias, were mostly concerned with self-defense.[248] However, a series of provocative acts by radical groups and political manipulations were enough for the system of shaky mutual trust to collapse.[249]

The process of manipulation so easily achieved its goals due to several factors. The Balkans had seen many examples of ethnic cleansing, mass deportations, and communal violence in the first half of the 20th century, primarily, but not exclusively, directed against Muslims.[250] These memories were buried, but not too deep, during the Tito regime, which produced enough victims, "war criminals" and "state enemies," especially among the nationalists and intellectuals, to give the Balkans a taste of violence.[251] If not inside the country, then in the Diasporas, virulent ultra-nationalist ideas and memories of the abuses were preserved.

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[245] Uppsala Universitet, *UCDP Database*.

[246] Ibid.

[247] Udovicki and Stitkovac, *Bosnia and Herzegovina: The Second War*, 188; Ejub Stitkovac, "Croatia: The First War," in *Burn this House: The Making and Unmaking of Yugoslavia*, eds. Jasminka Udovicki and James Ridgeway (Durham, NC: Duke University Press, 1997), 163.

[248] Udovicki and Stitkovac, *Bosnia and Herzegovina: The Second War*, 180.

[249] Ibid., 181.

[250] R. Gingeras, "The Empire's Forgotten Children: Understanding the Path from Ottomanism to Titoism in Muslim Macedonia, 1912–1953," (2010), 9 and 14.

[251] Mira Erdevicki and others, *Tito's Ghosts* (France: ZETA Productions, 2008).

The domination of the Serb element in the overarching Yugoslav national rhetoric added credibility to dissenting secessionist ideas and competition for power between local elites. Additionally, Belgrade created enough incentives for the former to advance these ideas. The competition of rival factions *inside* the local elites ensured that the most radical elements gained the upper hand.[252] In the Yugoslav liberalizing but weak political system, these factors combined with the political bankruptcy of previous leadership, economic breakdown, and the local realities of highly intermixed ethnic communities on top of persisting urban/rural and regional inequalities to create the conditions for the outbreak of inter-ethnic violence.

At the onset of the Bosnian civil war, the Bosnian government had neither an organized army nor access to enough weapons. In short, "the defense was largely based on a Bosnian territorial defense force. The Bosnian fighters managed to hold off the Serbian forces from taking over Sarajevo, but in the rest of the country, the Serbs made steady progress."[253] The international system was slow to react to early signs of trouble[254] and its intervention was weak when the violence ensued,[255] which added to the atmosphere of permissiveness, irresponsibility and impunity. The intense fighting continued until late 1995. Eventually, and arguably only due to direct international interference into the conflict, the parties were compelled to reach a peace agreement, which essentially created a federal government in Bosnia and Herzegovina.

### 2. The Major Factors Explaining Conflict Intensity

According to PRIO, the intensity of violence is recorded at 34.46 daily battle deaths and the total number of killed in battle is estimated at 44,800 (Figure 8). The exact figures are still subject to debate, with some sources counting the amount of deaths as high as 200,000.[256]

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[252] Udovicki and Stitkovac, *Bosnia and Herzegovina: The Second War*, 189.

[253] Uppsala Universitet, *UCDP Database*.

[254] Udovicki and Stitkovac, *Bosnia and Herzegovina: The Second War*, 201.

[255] Ibid., 196; Stitkovac, *Croatia: The First War*, 166.

[256] Lara J. Nettelfield, "Research and Repercussions of Death Tolls: The Case of the Bosnian Book of the Dead," in *Sex, Drugs, and Body Counts: The Politics of Numbers in Global Crime and Conflict*, eds. Peter Andreas and Kelly M. Greenhill (Ithaca, NY: Cornell University Press, 2010), 159–187.
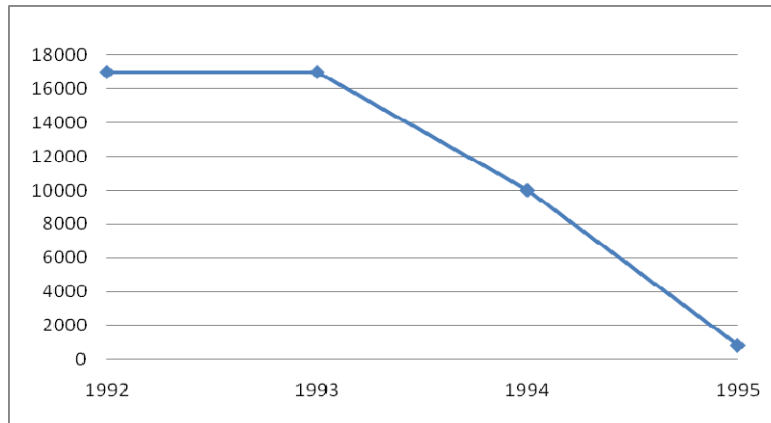
Figure 8.    The Intensity of Bosnian Civil War by Year

The Bosnia and Herzegovina ethnic geography is highly intermingled both locally and regionally (Figure 9). Numerically large Serb and Croat minorities were located in several geographic clusters. The proportion of areas cohabited by several ethnicities was also very substantial. These factors combined with the presence of a large number of militarily empowered local militias having conflicting allegiances to the old and new regimes, different ethnic groups and political actors. The Yugoslavian concept of territorial defense as a supplement to a standing military meant that large, locally-based, and ethnically heterogeneous sections of society were militarized and trained in military skills.[257] Those skills were put to use in the bloodiest way.

Together with many conventional battles and movements of troops, the conflict was characterized by numerous uncontrolled attacks on poorly protected civilian targets, the shelling of civilian targets, and other war crimes.[258]

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[257] United States and Central Intelligence Agency, *Balkan Battlegrounds: A Military History of the Yugoslav Conflict, 1990–1995*, 47.

[258] Steven L. Burg and Paul Shoup, *The War in Bosnia-Herzegovina: Ethnic Conflict and International Intervention* (Armonk, NY: M.E. Sharpe, 1999), 499.
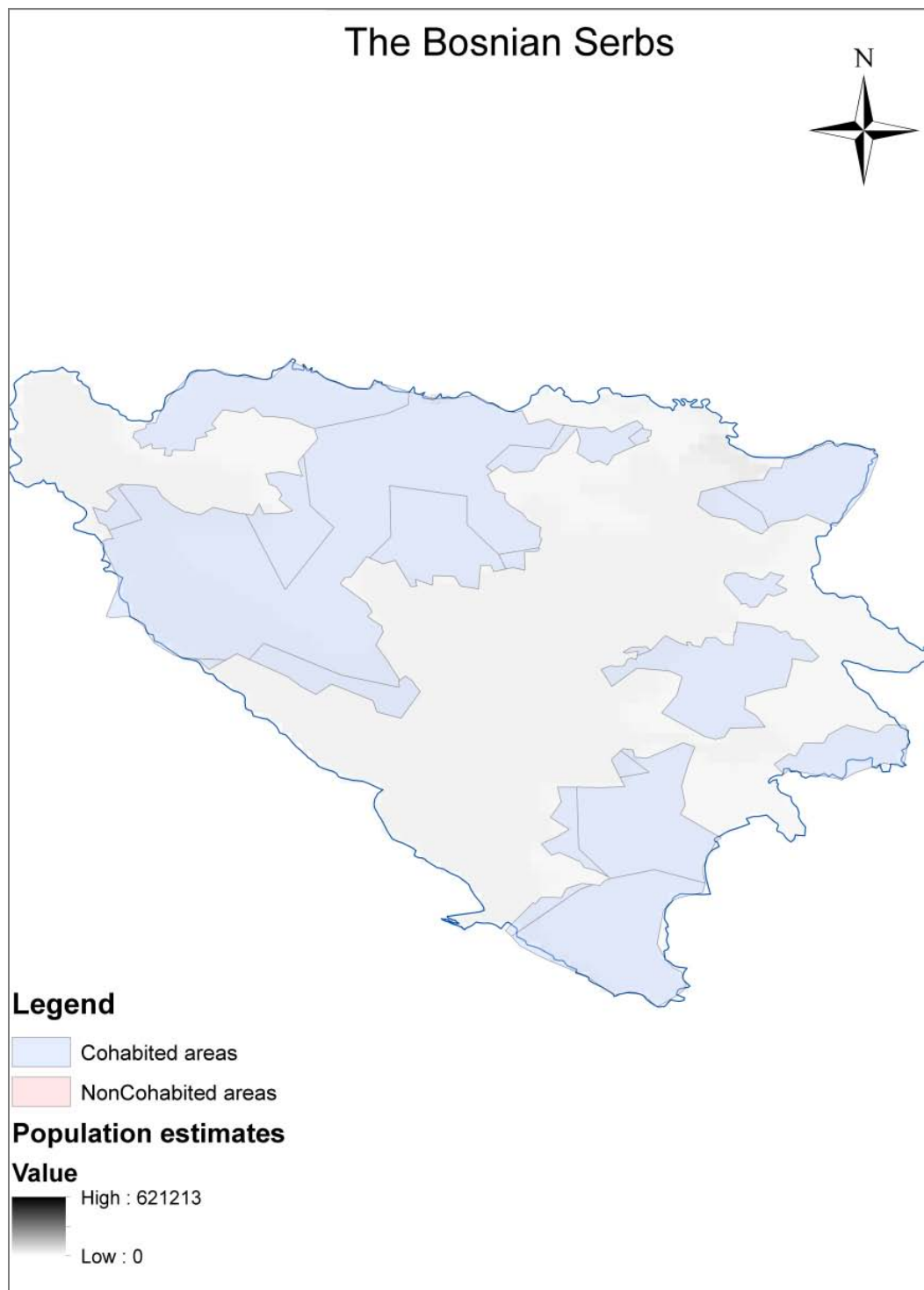
Figure 9.    The Ethnic Settlements of Serbs in Bosnia[259]

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[259] Map created using ESRI ArcGIS software. http://www.esri.com/

### a. *Indicators Related to Central Actors*

On each side there were irresponsible political manipulators who sought to benefit from competition and confrontation instead of promoting cooperation and negotiations. They emphasized exclusive (zero-sum) ethnic identities and irreconcilable nationalist agendas built on infamous examples of past violence. The extremists were not only issuing dark prophesies in an attempt to build their political capital and draw public attention, but they were actively engaging in fulfilling their own portents.

According to the UCDP, "The Yugoslav leadership was also accused of manipulating Serbian militias, fanning nationalism and distributing weapons. […] The leadership in the Bosnian republic was initially made up of representatives both from the Croat, Serb and Muslim communities. However, by spring 1992, when Bosnia had become an independent state, Muslims had come to dominate its government."[260] The strategic intent behind the Croatian and Serbian efforts in the first part of the war was to seize militarily large portions of Bosnian territory, which also had a substantial presence of the Bosniak population, and then ethnically "homogenize" these areas to substantiate their claims to their new possessions.

### b. *Indicators Related to Perpetrators*

In the first phases of conflict, the Yugoslavian national Army (JNA) was fighting together with Serb mercenaries and local militias. According to the UCDP,

> The Bosnian Serbs were led by Radovan Karadzic and Ratko Mladic. Their forces were a mixture of nationalists, mercenaries and ordinary unemployed people. Many Serbian officers and Bosnian Serb soldiers serving in JNA (Yugoslavian National Army) had also been incorporated in the Bosnian Serb army. The Bosnian Serbs were assisted by independent militias set up by Serbs originating from Serbia or Croatia. Many of these irregular forces had previously been active in the conflict between the republic of Croatia and Croatian Serbs. At times, the Bosnian Serbs and the Serb militias carried out operations together, but occasional

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[260] United States and Central Intelligence Agency, *Balkan Battlegrounds: A Military History of the Yugoslav Conflict, 1990–1995*.

clashes between these local Serbs and non-local Serbs also took place. On many occasions, it was unclear what force controlled the other. Thus, the distinction between JNA, the Bosnian Serb army and Serbian irregulars was often hard to make. [261]

After a new Yugoslavian constitution was adopted in May 1992, the JNA formally left Bosnia and Herzegovina and ceased to officially support local Serbian forces. However, it allegedly continued supporting the irregular Serb forces participating in the conflict.[262]

In numerous cases, the irregular and standing military forces were found guilty of war crimes. The local component of the irregular militias was instrumental in identifying and persecuting targets among the ethnic "others."[263]

### c. Indicators Related to Victims

The conflict was markedly fought along ethnic lines and characterized by major victimization of civilians. For example, the safe areas were shelled on repeated occasions. According to the UCDP, "the killing of civilians based on their ethnic affiliation was undertaken on a large scale. This so-called 'ethnic cleansing' strategy claimed tens of thousands of lives."[264]

### d. Indicators Related to Environment

The population in Bosnia and Herzegovina was predominantly rural, with a medium to low density. Most areas were ethnically heterogeneous and the level of the development of infrastructure and economy was one of the lowest in Yugoslavia. Bosnia and Herzegovina are located in mountainous region, making effective communication, coordination and control of the friendly forces difficult to achieve. At the same time, these geographic conditions made escape easier in some cases, which is also evidenced by the large number of refugees that fled from conflict zones.

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[261] Uppsala Universitet, *UCDP Database*.

[262] Uppsala Universitet, *UCDP Database*.

[263] United States and Central Intelligence Agency, *Balkan Battlegrounds: A Military History of the Yugoslav Conflict, 1990–1995*, 144–145.

[264] Uppsala Universitet, *UCDP Database*.

### e. *Indicators Related to Endogenous Processes of Civil War*

The conflict was almost entirely characterized by intense fighting. As stated by UCDP, "A high level of fighting continued throughout 1994. Ceasefires were agreed upon only to quickly be broken. […] The Bosnian Serbs violated the UN safe areas repeatedly throughout the year, which led to intense fighting between the Bosnian Serbs and UN."[265] Serbian forces initially achieved control over large parts of the territory inhabited by the Bosniaks, but in the second phase of the campaign the Bosnian control over these areas was regained. The targeting of unprotected civilians, the mass murders and the other war crimes that were committed throughout the civil war were endemic.

### 3. Conclusion

The Bosnian case is one the most intense ethnic conflicts in modern history. Both of the mechanisms that are specified in this thesis as a link between settlement patterns and violence were featured heavily in this civil war. All parties involved in the conflict (excluding peacekeepers) targeted small enclaves of ethnically diverse populations on a mass scale and ethnic cleansing of conquered areas became one of the major characteristics of the conflict. At the same time, no central authority could exercise enough control over its forces to allow for damage control. Small but multiple gangs and militias were engaged in mass killings of ethnic enemies, clashes with peacekeepers and security forces, and skirmishes among themselves. The atmosphere of chaos that ruled in Bosnia and Herzegovina for two and a half years is responsible for tens, if not hundreds, of thousands of deaths.

### E. CONCLUSION

In all four cases, the ethnic settlement patterns played different, but important roles in determining the trajectory and scope of violence. The case studies demonstrated that ethnic settlement patterns deserve close inspection in every attempt to explain the

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[265] Uppsala Universitet, *UCDP Database*.

intensity of fighting in ethnic civil wars (Table 12). Low regional and local intermingling between the ethnic groups that are associated with conflicting parties has been found to coincide with generally low intensity of civil war. The Slovenian case is a good example of this link. In the most ambiguous Bangladesh case, where the degree of local intermingling between ethnic groups increased during the conflict, we observed the deliberate actions of military forces to create segregated communities and "harden" ethnic targets, thus preventing possible operation of the motivation mechanism. The decentralized command and control of insurgents that should have enabled the organizational mechanism, demonstrated the importance of the tradeoff between military capability and command and control function. Weak control and factionalism in the insurgent organization also coincided with their military weakness and numerical inferiority compared to the enemy, thus preventing them from accomplishing goals that are more ambitious and potentially more deadly.

Table 12.    Violence and Settlement-related Factors Observed in the Studied Cases

| Case / Factor | Bangladesh | Sri Lanka | Slovenia | Bosnia and Herzegovina |
|---|---|---|---|---|
| Battle intensity | Low | High | Low | High |
| Overall severity | Medium | High | Low | High |
| Regional intermingling | Low | High | Low | High |
| Local intermingling | Medium | High to medium | Low | High |
| Opportunity mechanism | Rare | Present | Not observed | Present |
| Organizational mechanism | Seldom observed | Present | Not observed | Present |
| Possible intervening factors | Military strategy of communities separation, indiscriminate retaliation, weakness of insurgency | Coercive insurgent and state tactics, common use of conventional operations | Possible perpetrators of violence toward ethnic others were on defensive (JNA) | None |

High level of local and regional intermingling, both in Sri Lankan and Bosnian cases, coincided with the high intensity of violence. Huge loss of civilian life through violence in conventional battles, guerilla operations, terrorist acts and mass murders can be attributed both to deliberate choices of actors (motivation mechanism), and their neglect (organizational mechanism).

In both civil wars, widespread use of conventional tactics was also responsible for a lot of violence. At the same time, violence from such operations is more easily and fully recorded in official accounts of the civil wars. while other types of battle related violence are arguably less systematically collected. The information that would allow thorough analysis of cases of ethnic violence is often missing due to the deliberate policies of the corresponding participants in a conflict, or neglect on behalf of the international community.

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# VII.  CONCLUSION

In the observable future, the right of ethno-nationalist groups for self-determination is likely to continue to affect international relations and global security. Its violent manifestations will continue to take human lives throughout the world. As an analytic concept, ethnic civil wars are far from being the ideal subject, since it is often difficult to separate political violence from other forms of violence, and genuinely ethnic causes of conflict from non-ethnic causes. Still, despite its ambiguities, the distinction between ethnic and non-ethnic civil wars remains an informative and valid matter of study.[266]

The overwhelming majority of scholarly attention has, until recently, been devoted only to determining factors that cause the onset of civil war and ethnic conflict. And while it is important to know what causes war, that information alone is not enough. The question this thesis attempted to address was why some inter-ethnic conflicts result in significantly more violence than others do. The suggested answers to this complex problem were by no means complete, since a comprehensive theory of ethnic civil war has still to be formulated.

The major focus of this thesis has been on ethnic civil war as specific environment, which, this thesis argued, informs actors' decisions in unique ways. As previously stated, settlement patterns of ethnic groups fighting civil wars can present strategic challenges for the insurgents, the involved states, and the international community. The more the conflicting actors' population bases are intermixed, the easier targets they become, and the more loosely controlled militant units they are likely to produce. The intermingling can occur on a local and regional scale, with clusters of homogeneous population ranging in size from several households to entire

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[266] The variables that explained intensity of violence in all civil wars in Lacina's analysis (Lacina, *Explaining the Severity of Civil Wars*, 276–289) were not significant when tested on the subset of ethnic civil wars, which means that some other factors may be more important in determining intensity of ethnic violence.

provinces/regions. Abundance of small and weak enclaves easily attacked by unrestrained or poorly controlled armed groups, increase the likelihood of greater harm and human suffering in the conflict.

Within this logic, this thesis has proposed and tested two mechanisms that link ethnic settlements to the intensity of fighting. The *motivational* mechanism, which treats intensity of conflict and casualty counts as premeditated damage, posits that actors choose to attack the smaller enclaves of ethnically different populations as a preventive strike to secure the survival of their own ethnic kin, or because these enclaves represent easy targets. The *organizational* mechanism, which views greater intensity of conflict in more mixed communities as collateral damage, posits that interspersed ethnic groups are likely to produce an abundance of small, disconnected, and loosely organized militant units, which are virtually impossible to effectively manage and command, and, subsequently, it becomes impossible to control the amount of damage.

The general empirical test of the hypotheses using geospatial data on the ethnic settlement patterns was conducted in the statistical part of this thesis, while the case study section concentrated on identifying the indicators that may show the actual presence of the specified mechanisms in particular civil wars. As expected, the evidence found during the case analysis suggested that, together with other factors, settlement patterns have an important impact on the intensity of violence in ethnic civil wars. All four case studies demonstrated that the ethnic settlement patterns played different, but important roles in determining the trajectory and scope of violence. Therefore, ethnic settlement patterns deserve a close inspection when attempting to explain the intensity of fighting in ethnic civil wars.

The case studies, which allowed a closer look not only at the data collected in GeoEPR and GREG, but also on detailed accounts of events and conflict data, found convincing evidence that the proposed hypotheses are valid and the specified causal mechanisms are operating in the conflict environment. Low regional and local intermingling between the ethnic groups that are associated with conflicting parties has been found to coincide with generally low intensity of civil war. The Slovenian case is a good example of this link. In the most ambiguous Bangladesh case, where the degree of

local intermingling between ethnic groups increased during the conflict, military forces deliberately attempted to create segregated communities and "harden" ethnic targets, thus preventing possible operation of the motivation mechanism. The decentralized command and control of insurgents that should have enabled the organizational mechanism, demonstrated the importance of the tradeoff between military capability and command and control function. Weak control and factionalism in the insurgent organization coincided with their military weakness and numerical inferiority compared to the enemy, thus preventing them from accomplishing goals that were more ambitious and potentially more deadly.

High level of local and regional intermingling, both in Sri Lankan and Bosnian cases, coincided with the high intensity of violence. Huge loss of civilian life through violence in conventional battles, guerilla operations, terrorist acts and mass murders can be attributed both to deliberate choices of actors (motivation mechanism), and their inability to prevent local perpetrators from inflicting unnecessary damage (organizational mechanism). In both civil wars, widespread use of conventional tactics was also responsible for a lot of violence. At the same time, violence from such operations is more easily and fully recorded in official accounts of the civil wars, while other types of battle related violence are arguably less systematically collected.

Unfortunately, the statistical analysis did not provide definitive results that would allow confirming or refuting of the hypotheses regarding ethnic settlement patterns and the intensity of violence in ethnic civil wars. It is not entirely clear whether poor results point to the non-relationship between the ethnic settlement patterns and intensity of violence, or the deficiencies of existing data did not allow capturing that relationship. Data limitations did not allow achieving more unambiguous results in the statistical part of this research. The collection of relevant information remains the major challenge for the research on civil wars. Even the data on battle deaths may not be accurately collected because the host nation or independent sources do not report such data for various reasons, or the casualties are codified not as battle deaths but communal or one-sided violence. The deficit of accurate information on civil wars and ethnic conflicts will continue to plague the credibility of research results.

At the same time, additional factors were found to correlate with higher intensity of ethnic violence. It has been found that the variables that proxy democracy in the respective states and political status of the respective ethnic group are statistically significant predictors of violence. The direction of their influence on conflict intensity indicates that regimes that are more democratic face lower risk of severe casualties in ethnic civil wars, while groups that enjoy higher political status in the respective society face greater risk of more violent war. Thus, groups that have had higher standing in less democratic societies are associated with greater intensity of violence. As a tentative explanation, it has been suggested that for groups that have enjoyed higher status in undemocratic states, the stakes in the conflict are higher (e.g., they view conflict as a zero-sum game), or they have better access to military resources. Since the impact of these factors was not fully investigated here, future research may examine this finding further.

Certain criteria must be met in order for further research efforts to achieve better understanding of the ethnic civil conflicts. First, a better and more fine-grained data is required on the intensity of ethnic conflicts. The intensity measure could include not only the estimates of battle-related deaths, but also other negative impacts of civil wars. Second, as the ethnic conflicts continue to take human lives, there is an acute need to create a more comprehensive and accurate account of ethnicities and their boundaries.

Future studies would undoubtedly benefit from such major data collection efforts. Further research in the area investigated in this thesis may include into analysis other specific factors that potentially affect conflict intensity, and focus on specific roles of different actors or types of actors in the conflict. The mechanisms outlined here can be further investigated in cases outside the realm of civil conflict, but inside the realm of ethnic violence—namely, in genocidal and communal violence.

What do the findings in this thesis suggest with respect to policy options for the states and international community towards current and future possible ethnic conflicts? Promoting international security is an expensive and resource demanding mission. Since civil wars and ethnic conflicts are many, eventually the international community faces the need to prioritize its efforts. Domestically, governments also need to effectively distribute

their limited resources, especially in conflict prone countries. Because of this lack of resources, potential intensity of war is a critical principle for the prioritization of efforts directed at managing crises, both in terms of preventing great loss of human life and decreasing the second-order effects of intense fighting in post-conflict environment. If the likelihood of greater intensity in the unfolding conflict is higher, it definitely deserves more attention from the international community or the corresponding state. If the conflict is potentially more deadly, more resources may be allocated to prevent escalation, even to include physical separation of affected communities after the conflict onset.[267] Better understanding of ethnic war would allow choosing adequate actions that reduce the risk of high casualties in the conflicts.

In most cases (like in Bosnia or Sri Lanka) the local communities have peacefully coexisted for decades or even centuries, which makes the ensuing severe violence during conflict in such settings especially hard to explain. Thus, the choice of adequate option by a state or international community must be informed by better understanding of factors that cause higher intensity. These options include pacification efforts, disarmament, resettlement, military conventional and counterinsurgency operations, together with the information operations and public campaigns that would restore trust in damaged society.

The previous cases of mass atrocities demand our continued attention to the question of conflict intensity. If it is impossible to prevent all violence altogether, the governments and the international community should at least seek to reduce the human costs of conflicts, including ethnic civil wars.

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[267] To do this before the outbreak of violence would be an outright provocation of the conflict.

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# APPENDIX A.    MATCHING THE EPR AND PRIO DATASETS

Since the Ethnic Power Relation's dataset uses the same coding of conflicts as the EAC dataset (though it should be noted that the EAC includes more information about the episodes coded as ethnic conflicts), this study will use EAC to match EPR (and, subsequently, GeoEPR) to the PRIO's data on conflicts and battle deaths.

In some cases, multiple groups are recorded as fighting the same war. Since casualties suffered by separate actors cannot be discerned, this study will aggregate such groups into a meta-group. In other cases, one group may be fighting several conflicts. If there is only one observation of settlements for such groups, the separate episodes of conflicts they fight will have to be aggregated to obtain one measure of intensity.

In many cases, the EAC's dataset years of conflict did not match the years of conflict as coded in PRIO. The major reason for this can include different requirements for inclusion of conflicts into the datasets.[268] While this thesis adopts the PRIO definition of *conflict*, it adopts the EAC's and EPR's definition of *ethnic* conflict.

Table 13.    Matching the EPR/EAC Episodes to PRIO Cases

| PRIO | | | EAC | | | Decision |
|---|---|---|---|---|---|---|
| ID | StartDate2 (dd.mm.yyyy) | EpEndDate (dd.mm.yyyy) | Warid | startyr | endyr | |
| 2 | 01.08.1946 | 31.12.1953 | | | | Dropped from analysis as an extrasystemic war |
| 5 | 01.01.1946 | 30.06.1949 | | | | Dropped from analysis as an extrasystemic war |
| 6 | 01.01.1979 | 31.12.1988 | 10602 | 1979 | 1996 | Combined PRIO episodes in corresponding EAC case* |
| 6 | 01.01.1990 | 31.12.1990 | | | | |
| 6 | 01.01.1993 | 31.12.1993 | | | | |
| 6 | 01.01.1996 | 31.12.1996 | | | | |
| 8 | 01.01.1946 | 31.12.1946 | | | | Dropped from analysis as an extrasystemic war |
| 9 | 01.03.1946 | 31.10.1953 | | | | Dropped from analysis as an extrasystemic war |

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[268] For more information on coding rules used in EAC, see the EAC website at http://dvn.iq.harvard.edu/dvn/dv/epr/faces/study/StudyPage.xhtml?studyId=36583 (accessed October 22, 2010). For coding rules of PRIO, see the UCDP PRIO website at http://www.prio.no/CSCW/Datasets/Armed-Conflict/UCDP-PRIO/ (accessed October 22, 2010).

| PRIO | | | EAC | | | Decision |
|---|---|---|---|---|---|---|
| ID | StartDate2 (dd.mm.yyyy) | EpEndDate (dd.mm.yyyy) | Warid | startyr | endyr | |
| 10 | 01.09.1969 | 13.12.1995 | 11001 | 1969 | 2005 | Combined PRIO episodes in corresponding EAC case |
| 10 | 23.11.1997 | 22.12.1997 | | | | |
| 10 | 06.06.1999 | 31.12.2008 | | | | |
| 17 | 20.11.1946 | 21.07.1954 | | | | Dropped from analysis as an extrasystemic war |
| 19 | 01.06.1947 | 18.09.1948 | | | | Dropped because of missing information on settlement patterns |
| 21 | 29.03.1947 | 31.12.1947 | | | | Dropped from analysis as an extrasystemic war |
| 23 | 01.02.1949* | 28.04.1992 | 12300 | 1948* | 2005 | Combined PRIO episodes in corresponding EAC case |
| 23 | 27.01.1995 | 31.12.1995 | | | | |
| 23 | 01.01.1997 | 31.12.2003 | | | | |
| 23 | 12.04.2005 | 31.12.2008 | | | | |
| 24 | 20.03.1990 | 31.12.1992 | 12401 | 1990 | 1994 | Combined PRIO episodes in corresponding EAC case |
| 24 | 01.01.1994 | 31.12.1994 | | | | |
| 25 | 01.01.1948 | 31.12.1988 | 12500 | 1948 | 1994 | Combined PRIO episodes in corresponding EAC case |
| 25 | 29.12.1991 | 31.12.1992 | | | | |
| 25 | 01.01.1994 | 31.12.1994 | | | | |
| 26 | 27.03.1990 | 31.12.1990 | 12601 | 1990 | 1996 | Combined PRIO episodes in corresponding EAC case |
| 26 | 23.12.1996 | 31.12.1996 | | | | |
| 29 | 01.01.1990 | 31.12.1994 | 12902 | 1990 | 2005 | Combined PRIO episodes in corresponding EAC case |
| 29 | 01.01.1996 | 31.12.2008 | | | | |
| 31 | 19.06.1948 | 31.08.1957 | | | | Dropped from analysis as an extrasystemic war |
| 37 | 01.01.1949 | 31.12.1964 | 13700 | 1949 | 2005 | Combined PRIO episodes in corresponding EAC case |
| 37 | 01.01.1965 | 31.12.1996 | | | | |
| 37 | 01.11.2000 | 31.12.2008 | | | | |
| 41 | 30.10.1950 | 01.11.1950 | | | | Dropped from analysis as an extrasystemic war |
| 44 | 22.10.1952 | 31.12.1956 | | | | Dropped from analysis as an extrasystemic war |
| 47 | 07.11.1953 | 02.03.1956 | | | | Dropped from analysis as an extrasystemic war |
| 48 | 01.04.1953 | 31.01.1956 | | | | Dropped from analysis as an extrasystemic war |
| 49 | 29.11.1954 | 18.03.1962 | | | | Dropped from analysis as an extrasystemic war |
| 51 | 02.06.1955 | 19.02.1959 | | | | Dropped from analysis as an extrasystemic war |
| 54 | 01.01.1956 | 31.12.1959 | 15400 | 1956 | 1968 | Combined PRIO episodes in corresponding EAC case |
| 54 | 01.01.1961 | 15.06.1968 | | | | |

| PRIO | | | EAC | | | Decision |
|---|---|---|---|---|---|---|
| ID | StartDate2 (dd.mm.yyyy) | EpEndDate (dd.mm.yyyy) | Warid | startyr | endyr | |
| 54 | 01.07.1992 | 01.08.1997 | 15401 | 1992 | 2005 | Combined PRIO episodes in corresponding EAC case |
| 54 | 01.01.2000 | 31.12.2000 | | | | |
| 54 | 23.01.2005 | 31.12.2007 | | | | |
| 56 | 01.01.1992 | 31.12.1992 | 15601 | 1992 | 2005 | Combined PRIO episodes in corresponding EAC case |
| 56 | 01.01.1996 | 31.12.1996 | | | | |
| 56 | 16.01.2005 | 13.12.2005 | | | | |
| 57 | 01.09.1957 | 31.12.1959 | | | | Dropped from analysis as an extrasystemic war |
| 59 | 12.01.1957 | 30.06.1958 | | | | Dropped from analysis as an extrasystemic war |
| 60 | 23.11.1957 | 31.12.1958 | | | | Dropped from analysis as an extrasystemic war |
| 62 | 01.08.1982 | 31.12.1984 | 16201 | 1982 | 1996 | Combined PRIO episodes in corresponding EAC case |
| 62 | 01.01.1987 | 31.12.1987 | | | | |
| 62 | 01.01.1991 | 31.12.1996 | | | | |
| 63 | 02.09.1975 | 22.10.1976 | 16301 | 1975 | 1990 | Combined PRIO episodes in corresponding EAC case |
| 63 | 01.09.1982 | 29.09.1986 | | | | |
| 63 | 15.03.1989 | 13.10.1990 | | | | |
| 64 | 15.01.1974 | 31.12.1975 | 16401 | 1974 | 1981 | Combined PRIO episodes in corresponding EAC case |
| 64 | 01.01.1981 | 31.12.1981 | | | | |
| 65 | 12.11.1959 | 26.04.1961 | 16500 | 1959 | 1973 | Combined PRIO episodes in corresponding EAC case |
| 65 | 01.01.1963 | 22.02.1973 | | | | |
| 66 | 04.02.1961 | 27.07.1974 | | | | Dropped from analysis as an extrasystemic war |
| 67 | 22.11.1959* | 31.12.1970 | 16700 | 1960* | 2005 | Combined PRIO episodes in corresponding EAC case |
| 67 | 01.01.1972 | 31.12.1973 | | | | |
| 67 | 01.01.1976 | 31.12.1988 | | | | |
| 67 | 01.01.1993 | 31.12.2002 | | | | |
| 67 | 27.12.2005 | 31.12.2008 | | | | |
| 73 | 22.04.1961 | 30.06.1962 | | | | Dropped from analysis as a non-ethnic conflict |
| 76 | 08.02.1962 | 31.12.1962 | | | | Dropped from analysis as an extrasystemic war |
| 78 | 15.03.1964 | 28.05.1991 | | | | Added into analysis as 17800 (1964–1974) and 17801(1975–1991) |
| 80 | 01.04.1982 | 31.12.1982 | | | | Dropped from analysis as a non-ethnic conflict |
| 82 | 01.02.1963 | 31.12.1973 | | | | Dropped from analysis as an extrasystemic war |
| 86 | 25.11.2006 | 31.12.2008 | | | | Added to 18602 since new episode continued with the same ethnic group |
| 88 | 19.11.1964 | 27.07.1974 | | | | Dropped from analysis as an extrasystemic war |

| PRIO | | | EAC | | | Decision |
|---|---|---|---|---|---|---|
| ID | StartDate2 (dd.mm.yyyy) | EpEndDate (dd.mm.yyyy) | Warid | startyr | endyr | |
| 89 | 25.11.1964 | 30.11.1967 | | | | Dropped from analysis as an extrasystemic war |
| 90 | 26.11.1991 | 31.12.1992 | 19001 | 1991 | 2005* | Combined PRIO episodes in corresponding EAC case |
| 90 | 18.10.1994 | 07.09.2006* | | | | |
| 90 | 01.03.2008 | 31.12.2008 | | | | Added to 19001, since new episode continued with the same ethnic group |
| 94 | 28.07.1965 | 31.12.1965 | 19400 | 1965 | 1978 | Combined PRIO episodes in corresponding EAC case |
| 94 | 01.01.1967 | 31.12.1969 | | | | |
| 94 | 01.01.1976 | 31.12.1978 | | | | |
| 95 | 14.11.2007 | 31.12.2008 | | | | Dropped from analysis as a non-ethnic conflict |
| 98 | 31.12.1981 | 31.12.1981 | 19801 | 1981 | 1983 | Dropped from analysis as a non-ethnic conflict |
| 98 | 19.06.1983 | 19.06.1983 | | | | |
| 101 | 26.08.1966 | 22.12.1988 | | | | Added as 20100 |
| 119 | 01.08.1971 | 15.12.1991 | 21900 | 1971 | 1998 | Combined PRIO episodes in corresponding EAC case |
| 119 | 15.08.1998 | 18.08.1998 | | | | |
| 122 | 05.09.1967 | 31.12.1968 | | | | Added to 22200 |
| 129 | 01.08.2004 | 31.12.2008 | | | | Added to 22900 |
| 130 | 30.04.1997 | 31.12.1997 | 23000 | 1997 | 2003 | Combined PRIO episodes in corresponding EAC case |
| 130 | 01.01.1999 | 31.12.1999 | | | | |
| 130 | 01.01.2003 | 31.12.2003 | | | | |
| 131 | 11.11.1975 | 31.12.1995 | 23100 | 1975 | 2002 | Combined PRIO episodes in corresponding EAC case |
| 131 | 12.03.1998 | 04.04.2002 | | | | |
| 133 | 26.02.1994 | 31.12.1994 | | | | Added to 23301 |
| 133 | 01.01.1996 | 31.12.1996 | 23301 | 1996 | 2005* | Combined PRIO episodes in corresponding EAC case |
| 133 | 01.01.1999 | 31.12.2002 | | | | |
| 133 | 01.01.2004 | 31.12.2008* | | | | |
| 134 | 07.12.1975 | 31.12.1989 | 23400 | 1975 | 1998 | Combined PRIO episodes in corresponding EAC case |
| 134 | 15.12.1992 | 31.12.1992 | | | | |
| 134 | 31.05.1997 | 31.12.1998 | | | | |
| 139 | 01.01.1978 | 12.08.1988 | 23900 | 1978 | 2004 | Combined PRIO episodes in corresponding EAC case |
| 139 | 12.10.1992 | 23.08.1993 | | | | |
| 139 | 31.10.1995 | 31.12.1995 | | | | |
| 139 | 01.01.1997 | 31.12.2004 | | | | |
| 139 | 07.11.2006 | 31.12.2006 | | | | Added to 23900 |
| 141 | 01.01.1982* | 31.12.1984 | 24101 | 1981* | 1996 | Dropped as a non-ethnic conflict |
| 141 | 03.03.1986 | 31.12.1996 | | | | |
| 141 | 24.10.2006 | 31.12.2008 | | | | Dropped as a non-ethnic conflict |
| 142 | 03.08.1979 | 03.08.1979 | | | | Dropped as a non-ethnic conflict |

| PRIO | | | EAC | | | Decision |
|---|---|---|---|---|---|---|
| ID | StartDate2 (dd.mm.yyyy) | EpEndDate (dd.mm.yyyy) | Warid | startyr | endyr | |
| 143 | 01.01.1979 | 31.12.1982 | 24400 | 1979 | 2001 | Dropped as a non-ethnic conflict |
| 143 | 01.01.1986 | 31.12.1988 | | | | |
| 143 | 01.01.1991 | 31.12.1993 | | | | |
| 143 | 01.01.1997 | 31.12.1997 | | | | |
| 143 | 01.01.1999 | 31.12.2001 | | | | |
| 147 | 03.10.1980 | 31.12.1981 | 24800 | 1980 | 1992 | Combined PRIO episodes in corresponding EAC case |
| 147 | 01.01.1987 | 31.12.1987 | | | | |
| 147 | 01.01.1991 | 31.12.1992 | | | | |
| 150 | 01.01.1981 | 31.12.1983 | 25100 | 1981 | 1988 | Combined PRIO episodes in corresponding EAC case |
| 150 | 26.06.1985 | 31.12.1988 | | | | |
| 152 | 01.07.1982 | 31.12.1988 | 25300 | 1982 | 2005* | Combined PRIO episodes in corresponding EAC case |
| 152 | 01.01.1992 | 31.12.2000 | | | | |
| 152 | 01.01.2003 | 31.12.2008* | | | | |
| 157 | 10.09.1984 | 24.12.2001 | 25800 | 1983 | 2003 | Combined PRIO episodes in corresponding EAC case |
| 157 | 23.06.2003 | 31.12.2003 | | | | |
| 157 | 02.12.2005 | 31.12.2008 | | | | Added to 25800 |
| 158 | 01.01.1960 | 31.12.1961 | | | | Dropped as a non-ethnic conflict |
| 167 | 29.11.1989 | 29.11.1989 | | | | Dropped as a non-ethnic conflict |
| 168 | 01.06.1975 | 31.12.1976 | | | | Added to 26900 |
| 170 | 29.05.1990 | 31.12.1991 | 27100 | 1990 | 2005* | Combined PRIO episodes in corresponding EAC case |
| 170 | 01.01.1994 | 31.12.2008* | | | | |
| 171 | 08.09.1990 | 31.07.1991 | 27200 | 1990 | 2005 | Combined PRIO episodes in corresponding EAC case |
| 171 | 19.06.1999 | 12.10.2005 | | | | |
| 174 | 28.10.1989 | 31.12.1990 | 27600 | 1989 | 1996 | Dropped as a non-ethnic conflict |
| 174 | 02.08.1992 | 31.12.1996 | | | | |
| 177 | 21.07.1990 | 31.12.1990 | 27900 | 1990 | 1994 | Combined PRIO episodes in corresponding EAC case |
| 177 | 04.10.1994 | 31.12.1994 | | | | |
| 177 | 31.08.2007 | 31.12.2008 | | | | Added to 27900 |
| 180 | 01.08.1990 | 31.12.1990 | 28200 | 1990 | 2003 | Combined PRIO episodes in corresponding EAC case |
| 180 | 01.09.1992 | 08.07.1993 | | | | |
| 180 | 27.04.1995 | 31.12.1995 | | | | |
| 180 | 23.03.1997 | 31.12.1997 | | | | |
| 180 | 11.04.2000 | 31.12.2001 | | | | |
| 180 | 01.01.2003 | 31.12.2003 | | | | |
| 184 | 13.11.1991 | 26.12.1994 | | | | Dropped as a non-ethnic conflict |
| 184 | 24.07.1999 | 31.12.1999 | | | | Dropped as a non-ethnic conflict |

| PRIO | | | EAC | | | Decision |
|---|---|---|---|---|---|---|
| ID | StartDate2 (dd.mm.yyyy) | EpEndDate (dd.mm.yyyy) | Warid | startyr | endyr | |
| 192 | 01.06.1991 | 31.12.1991 | 29400 | 1991 | 2004 | Combined PRIO episodes in corresponding EAC case |
| 192 | 01.01.1994 | 31.12.1994 | | | | |
| 192 | 01.01.1996 | 31.12.1998 | | | | |
| 192 | 01.01.2002 | 31.12.2002 | | | | |
| 192 | 01.01.2004 | 31.12.2004 | | | | |
| 192 | 01.01.2007 | 31.12.2007 | | | | Added to 29400 |
| 195 | 01.07.1992 | 23.12.1993 | 29700 | 1992 | 1995 | Combined PRIO episodes in corresponding EAC case |
| 195 | 03.05.1995 | 12.11.1995 | | | | |
| 198 | 08.08.2008 | 31.12.2008 | | | | Added to 30001 |
| 200 | 29.06.1992 | 23.12.1996 | 30200 | 1992 | 1998 | Dropped as a non-ethnic conflict |
| 200 | 24.03.1998 | 09.11.1998 | | | | |
| 201 | 04.06.1993 | 18.06.1993 | 30300 | 1993 | 1995 | Dropped as a non-ethnic conflict |
| 201 | 17.03.1995 | 17.03.1995 | | | | |
| 206 | 11.12.1994 | 31.08.1996 | 30900 | 1994 | 2005* | Combined PRIO episodes in corresponding EAC case |
| 206 | 11.08.1999 | 07.10.2007* | | | | |
| 209 | 01.06.1990 | 31.12.1990 | 31200 | 1990 | 1996 | Combined PRIO episodes in corresponding EAC case |
| 209 | 01.01.1995 | 31.12.1996 | | | | |
| 209 | 15.07.2007 | 31.12.2008 | | | | Dropped as a non-ethnic conflict |
| 211 | 01.07.1995* | 31.12.1996 | 31400 | 1996* | 1999 | Dropped as a non-ethnic conflict |
| 211 | 01.01.1999 | 31.12.1999 | | | | |
| 213 | 05.09.1997 | 13.12.1997 | | | | Dropped because of absence of group settlement information both in GeoEPR and GREG |
| 214 | 04.11.1993 | 30.01.1994 | 31700 | 1993 | 2002 | Combined PRIO episodes in corresponding EAC case |
| 214 | 06.06.1997 | 29.12.1999 | | | | |
| 214 | 10.04.2002 | 31.12.2002 | | | | |
| 219 | 01.01.1977 | 31.12.1978 | | | | Added to 32200 |
| 219 | 01.01.1980 | 31.12.1981 | | | | Added to 32200 |
| 219 | 01.07.1983 | 31.12.1985 | | | | Added to 32200 |
| 219 | 01.11.1987* | 31.12.1992 | 32200 | 1989* | 2005* | Combined PRIO episodes in corresponding EAC case |
| 219 | 01.01.1994 | 31.12.1995 | | | | |
| 219 | 01.01.1998 | 31.12.2008* | | | | |
| 222 | 18.05.1996 | 25.01.1997 | | | | Dropped as a non-ethnic conflict |
| 222 | 27.11.2006 | 31.12.2006 | | | | Dropped because episode does not include EAC timeframe |
| 224 | 11.09.2001 | 31.12.2002 | | | | Dropped as a non-ethnic conflict |
| 224 | 01.01.2004 | 31.12.2008 | | | | Dropped as a non-ethnic conflict |
| 227 | 16.03.1989 | 31.12.1990 | 33100 | 1989 | 2004 | Combined PRIO episodes in corresponding EAC case |
| 227 | 01.01.1993 | 15.10.2004 | | | | |

| PRIO | | | EAC | | | Decision |
|---|---|---|---|---|---|---|
| ID | StartDate2 (dd.mm.yyyy) | EpEndDate (dd.mm.yyyy) | Warid | startyr | endyr | |
| 250 | 05.06.2004 | 29.09.2004 | | | | Defined as 34100 (new PRIO conflict id 250) |
| 251 | 10.07.1990 | 31.12.1999 | | | | Defined as 34200 (new PRIO conflict id 251). Dropped from analysis due to absence of relevant ethnic categories. |
| 251 | 13.07.2006 | 14.08.2006 | | | | Defined as 34201 (new PRIO conflict id 251). Dropped from analysis due to absence of relevant ethnic categories. |
| 253 | 15.12.1975 | 31.12.1978 | | | | Defined as 34300 (new PRIO conflict id 253). Dropped from analysis due to absence of relevant ethnic categories. |
| 254 | 01.02.2007 | 31.12.2008 | | | | Defined as 34400 (new PRIO conflict id 254) |
| 255 | 01.12.1991 | 31.12.1992 | | | | Defined as 34500 (new PRIO conflict id 255) |
| 255 | 19.10.1997 | 29.11.1997 | | | | Defined as 34500 (new PRIO conflict id 255) |
| 255 | 01.07.2007 | 31.12.2008 | | | | Defined as 34500 (new PRIO conflict id 255) |
| 257 | 28.11.2007 | 31.12.2008 | | | | Defined as 34600 (new PRIO conflict id 257). Dropped from analysis due to absence of relevant ethnic categories. |
| 258 | 30.10.2008 | 31.12.2008 | | | | Defined as 34700 (new PRIO conflict id 258). Dropped from analysis due to absence of relevant ethnic categories. |
| 259 | 09.11.2008 | 31.12.2008 | | | | Defined as 34800 (new PRIO conflict id 259). Dropped from analysis due to absence of relevant ethnic categories. |

Since the battle death data is taken from PRIO, duration of episodes is also taken from PRIO. This is due to the fact that this study is only interested in the periods of warfare. Also, this study continues the EAC's episodes duration until 2008 if the start year of the episode is before or includes 2005, or if the new episode in PRIO after 2005 is connected to the same incompatibility and major participants remain the same.

Table 14.    Episodes Present in the EPR/EAC but Absent in PRIO

| PRIO | | | EAC | | | Decision |
|---|---|---|---|---|---|---|
| ID | StartDate2 (dd.mm.yyyy) | EpEndDate (dd.mm.yyyy) | Warid | startyr | endyr | |
| 28 | | | 12800 | 1947 | 1948 | Dropped from analysis as a non-ethnic conflict |
| 32 | | | 13200 | 1948 | 1950 | Dropped from analysis as a non-ethnic conflict |
| 85 | | | 18501 | 1983 | 2004 | Since these years are included in 21302, these two cases (18501 and 21302) were analyzed together |
| 86 | 18.10.1996 | 31.12.2001 | 18602 | 1996 | 1997 | Joined these two EAC episodes and analyzed as ethnic conflict |
| | | | 18603 | 1998 | 2001 | |
| 103 | 02.04.1967 | 17.04.1975 | 20300 | 1967 | 1969 | Dropped from analysis as a non-ethnic conflict |
| 103 | 02.04.1967 | 17.04.1975 | 20301 | 1970 | 1975 | Dropped from analysis as a non-ethnic conflict |
| 103 | 01.12.1978 | 25.12.1998 | 20302 | 1978 | 1978 | Dropped from analysis as a non-ethnic conflict |
| 103 | 01.12.1978 | 25.12.1998 | 20303 | 1979 | 1998 | Dropped from analysis as a non-ethnic conflict |
| 111 | | | 21100 | 1970 | 1970 | Dropped from analysis as a non-ethnic conflict |
| 137 | 27.04.1978 | 07.12.2001 | 23700 | 1978 | 1992 | Dropped from analysis as a non-ethnic conflict |
| 137 | 27.04.1978 | 07.12.2001 | 23701 | 1992 | 1996 | Defined in PRIO as separate episode (23701) |
| 137 | 27.04.1978 | 07.12.2001 | 23702 | 1996 | 1999 | Added 23702 to 23703, defined as separate episode (23702) |
| | | | 23703 | 2000 | 2001 | Added 23702 to 23703, defined as separate episode (23702) |
| 249 | 23.09.2004 | 31.12.2004 | 33300 | 2004 | 2004 | Dropped from analysis as a non-ethnic conflict |
| 249 | 23.09.2004 | 31.12.2004 | 33301 | 2004 | 2004 | Defined as 34100 (new PRIO conflict id 250) |

Table 15.    Differences in EPR/EAC and PRIO Start and End Years Coding

| | PRIO | | EAC | | | Decision |
|---|---|---|---|---|---|---|
| ID | StartDate2 (dd.mm.yyyy) | EpEndDate (dd.mm.yyyy) | Warid | startyr | endyr | |
| 23 | 01.02.1949* | 28.04.1992 | 12300 | 1948* | 2005 | Adopted PRIO's start and end dates |
| 23 | 27.01.1995 | 31.12.1995 | | | | |
| 23 | 01.01.1997 | 31.12.2003 | | | | |
| 23 | 12.04.2005 | 31.12.2008 | | | | |
| 67 | 22.11.1959* | 31.12.1970 | 16700 | 1960* | 2005 | Adopted PRIO's start and end dates |
| 67 | 01.01.1972 | 31.12.1973 | | | | |
| 67 | 01.01.1976 | 31.12.1988 | | | | |
| 67 | 01.01.1993 | 31.12.2002 | | | | |
| 67 | 27.12.2005 | 31.12.2008 | | | | |
| 90 | 26.11.1991 | 31.12.1992 | 19001 | 1991 | 2005* | Adopted PRIO's start and end dates |
| 90 | 18.10.1994 | 07.09.2006* | | | | |
| 91 | 01.07.1966 | 30.09.1972 | 19100 | 1965 | 1978 | Added years 1976, 1977, and 1978 to PRIO episode |
| 91 | 28.02.1976 | 31.12.1984 | 19101 | 1980 | 1984 | Dropped from analysis as a non-ethnic conflict (except for years 1976, 1977, and 1978, included in 19100) |
| 91 | 01.01.1986* | 01.11.1987 | 19102 | 1987* | 1997* | Combined PRIO episodes in corresponding EAC case |
| 91 | 03.03.1989 | 31.12.1994* | | | | |
| 91 | 30.10.1997* | 31.12.2002 | 19103 | 1998* | 2002 | Adopted PRIO's start and end dates |
| 91 | 18.12.2005 | 31.12.2008* | 19104 | 2005 | 2005* | Added succeeding years |
| 118 | | | 21800 | 1971 | 1971 | Dropped from analysis as a non-ethnic conflict |
| 118 | 25.01.1971* | 31.12.1972 | 21801 | 1972* | 1972 | Adopted PRIO's start and end dates |
| 118 | 23.03.1974 | 25.03.1974 | | | | Dropped from analysis as a non-ethnic conflict |
| 118 | | | 21802 | 1977 | 1979 | Dropped from analysis as a non-ethnic conflict |
| 118 | 01.10.1978 | 31.12.1992 | 21804 | 1981 | 1986 | Dropped from analysis as a non-ethnic conflict (except for years 1986, 1987, 1988, 1989, 1990, 1991, and 1992, which were included in 21805) |
| 118 | 21.02.1994 | 18.10.2007* | 21805 | 1986 | 2005* | Added to analysis with years 1986, 1987, 1988, 1989, 1990, 1991, and 1992 included |
| 133 | 01.01.1996 | 31.12.1996 | 23301 | 1996 | 2005* | Adopted PRIO's start and end dates |
| 133 | 01.01.1999 | 31.12.2002 | | | | |
| 133 | 01.01.2004 | 31.12.2008* | | | | |
| 137 | 04.06.2003 | 31.12.2008* | 23704 | 2003 | 2005* | Dropped as a non-ethnic conflict |
| 141 | 01.01.1982* | 31.12.1984 | 24101 | 1981* | 1996 | Adopted PRIO's start and end dates, dropped as a non-ethnic conflict |
| 141 | 03.03.1986 | 31.12.1996 | | | | |

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| PRIO | | | EAC | | | Decision |
|---|---|---|---|---|---|---|
| ID | StartDate2 (dd.mm.yyyy) | EpEndDate (dd.mm.yyyy) | Warid | startyr | endyr | |
| 152 | 01.07.1982 | 31.12.1988 | 25300 | 1982 | 2005* | Adopted PRIO's start and end dates |
| 152 | 01.01.1992 | 31.12.2000 | | | | |
| 152 | 01.01.2003 | 31.12.2008* | | | | |
| 170 | 29.05.1990 | 31.12.1991 | 27100 | 1990 | 2005* | Adopted PRIO's start and end dates |
| 170 | 01.01.1994 | 31.12.2008* | | | | |
| 206 | 11.12.1994 | 31.08.1996 | 30900 | 1994 | 2005* | Adopted PRIO's start and end dates |
| 206 | 11.08.1999 | 07.10.2007* | | | | |
| 211 | 01.07.1995* | 31.12.1996 | 31400 | 1996* | 1999 | Adopted PRIO's start and end dates, Dropped as a non-ethnic conflict |
| 211 | 01.01.1999 | 31.12.1999 | | | | |
| 219 | 01.11.1987* | 31.12.1992 | 32200 | 1989* | 2005* | Adopted PRIO's start and end dates |
| 219 | 01.01.1994 | 31.12.1995 | | | | |
| 219 | 01.01.1998 | 31.12.2008* | | | | |

# APPENDIX B.    THE ETHNIC POWER RELATIONS DATASET'S WAR CODING AND THE GREG GROUPS CODING

In Appendix A, the ethnic conflicts from the EPR and GeoEPR datasets were joined with the PRIO data. In this appendix, the same definitions of conflicts that were obtained as a result of matching EPR to PRIO are used.

Table 16.    The List of Initial Discrepancies in Names Between GREG and EPR

| GREGid | GREG Name | CowGREGid | Warid | GeoEPR Name |
|--------|-----------|-----------|-------|-------------|
| 6 | Acholi | 5000006 | 21801 | Langi/Acholi |
| 77 | Assamese | 7500077 | 27100 | Assamese (non-SC/ST) |
| 86 | Aymara | 1452001 | 10101 | Quechua; Aymara |
| 87 | Azande | 6252002 | 18500 | Azande; Bari; Latoka; Other Southern groups |
| 88 | Azerbaijanians | 3650088 | 28400 | Azerbaijanis |
| 98 | Bagirmi | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |
| 110 | Bakongo | 4840110 | 31700 | Lari/Bakongo; Mbochi (proper) |
| 117 | Baloch | 7700117 | 22900 | Baluchis |
| 120 | Baluba | 4900120 | 16900 | Luba Kasai |
| 122 | Balunda | 5402007 | 23100 | Lunda-Chokwe;Ovimbundu-Ovambo |
| 129 | Banda | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |
| 135 | Bantu-speaking Pygmy tribes | 4500135 | 24700 | Indigenous Peoples |
| 144 | Bari | 6252002 | 18500 | Azande; Bari; Latoka; Other Southern groups |
| 173 | Berta | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |
| 324 | Danakil | 5300324 | 26900 | Afar |
| 332 | Dinka | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |
| 350 | English Irish and Scotch Irish | 2000350 | 21900 | Catholics In N. Ireland |

| GREGid | GREG Name | CowGREGid | Warid | GeoEPR Name |
|---|---|---|---|---|
| 362 | Ewe | 4610362 | 26400 | Ewe (and related groups) |
| 376 | Fulbe | 4710376 | 25900 | Fulani (and other northern Muslim peoples) |
| 387 | Galla | 5300387 | 32200 | Oroma |
| 396 | Gere | 4502010 | 24703 | Krahn (Guere); Mandingo |
| 404 | Gola | 4502010 | 24703 | Krahn (Guere); Mandingo |
| 434 | Hazara-Berberi | 7002009 | 23702 | Hazaras;Tajiks; Uzbeks |
| 435 | Hazara-Deh-i-Zainat | 7002009 | 23702 | Hazaras;Tajiks; Uzbeks |
| 459 | Ibo | 4750459 | 20000 | Igbo |
| 464 | Ijo | 4750464 | 34100 | Ijaw |
| 472 | Iran Arabs | 6300472 | 24500 | Arabs |
| 475 | Iraq Arabs | 6450475 | 16201 | Shi'a Arabs |
| 501 | Jordan and Palestine Arabs | 6660501 | 13700 | Israeli Arabs; Palestinian Arabs |
| 506 | Kacharis | 7500506 | 33100 | Bodo |
| 535 | Karen | 7750535 | 12300 | Kayin (Karens) |
| 574 | Koma | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |
| 583 | Kpelle | 4502010 | 24703 | Krahn (Guere); Mandingo |
| 594 | Kulango | 4372013 | 32800 | Northerners (Mande and Voltaic/Gur) |
| 620 | Lebanon Arabs | 6600620 | 16300 | Palestinians (Arab); Shi'a Muslims (Arab);Sunnis (Arab) |
| 634 | Livonians | 3650634 | 11200 | Latvians |
| 636 | Lobi | 4372013 | 32800 | Northerners (Mande and Voltaic/Gur) |
| 639 | Loma | 4502010 | 24703 | Krahn (Guere); Mandingo |
| 640 | Lotuko | 6252002 | 18500 | Azande; Bari; Latoka; Other Southern groups |
| 646 | Lushei | 7500646 | 19900 | Mizo |
| 689 | Mandingo | 4372013 | 32800 | Northerners (Mande and Voltaic/Gur) |
| 696 | Manipuris | 7500696 | 25300 | Manipuri |
| 698 | Mano | 4500698 | 24701 | Gio;Mano |
| 710 | Marind-anim, Sentani | 8500710 | 19400 | Papua |
| 719 | Mashona | 5410719 | 23600 | Shona-Ndau |
| 723 | Matebele | 5522006 | 22200 | Africans |

| GREGid | GREG Name | CowGREGid | Warid | GeoEPR Name |
|---|---|---|---|---|
| 748 | Miao | 8120748 | 16502 | Hmong |
| 760 | Mon (Talaing) | 7750760 | 12600 | Mons |
| 789 | Murle | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |
| 795 | Nagas | 7500795 | 15400 | Naga |
| 825 | Northern Lwo | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |
| 828 | Nubians | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |
| 829 | Nuer | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |
| 852 | Ovambo | 5402007 | 23100 | Lunda-Chokwe;Ovimbundu-Ovambo |
| 853 | Ovimbundu | 5402007 | 23100 | Lunda-Chokwe;Ovimbundu-Ovambo |
| 872 | Panjabis | 7500872 | 25700 | Punjabi-Sikhs (non-SC/ST) |
| 926 | Quechua | 1452001 | 10101 | Quechua; Aymara |
| 979 | Senufo | 4372013 | 32800 | Northerners (Mande and Voltaic/Gur) |
| 999 | Shoa-Arabs | 4832005 | 19104 | Arabs; Tamas |
| 1019 | Somalis | 5301019 | 23300 | Somali (Ogaden) |
| 1028 | Sudan Arabs | 4832005 | 19104 | Arabs; Tamas |
| 1042 | Syria Arabs | 6521042 | 20201 | Sunni Arabs |
| 1051 | Tajiks | 7002009 | 23702 | Hazaras;Tajiks; Uzbeks |
| 1054 | Tama | 4832005 | 19104 | Arabs; Tamas |
| 1057 | Tamils | 7801057 | 25800 | Sri Lankan Tamils |
| 1070 | Tem | 4611070 | 26401 | KabrΘ (and related groups) |
| 1082 | Teso | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |
| 1094 | Tigre | 5301094 | 17001 | Tigry |
| 1097 | Tippera | 7501097 | 23900 | Indigenous Tripuri |
| 1114 | Tonga | 5522006 | 22200 | Africans |
| 1123 | Trinidad Islanders | 521123 | 28500 | Blacks |
| 1136 | Tuaregs | 4322012 | 27900 | Whites (Tuareg & Arabs) |
| 1137 | Tubu | 4361137 | 31500 | Toubou |
| 1170 | Uzbeks | 7002009 | 23702 | Hazaras;Tajiks; Uzbeks |
| 1180 | Wachokwe | 5402007 | 23100 | Lunda-Chokwe;Ovimbundu-Ovambo |

| GREGid | GREG Name | CowGREGid | Warid | GeoEPR Name |
|--------|-----------|-----------|-------|-------------|
| 1218 | West Sahara Arabs | 4322012 | 27900 | Whites (Tuareg & Arabs) |
| 1222 | Xosa | 5602011 | 25100 | Xhosa;Zulu |
| 1243 | Zagawa | 4831243 | 19102 | Hadjera∩; Zaghawa, Bideyat |
| 1248 | Zulus | 5602011 | 25100 | Xhosa;Zulu |
| 1260 | For | 6252003 | 21302 | Dinka;Fur; Nuba; Nuer; Other Southern groups |

Some groups participated in more than one conflict (they are defined as distinct conflicts in EAC, but in most cases PRIO defines them as separate episodes of the same conflict, which is seen from the first four digits of the EAC Warid coding).

Table 17.     GREG Groups Participation in More Than One Conflict

| cowcode | statename | group | GREGid | Warid | Included Warids |
|---------|-----------|-------|--------|-------|-----------------|
| 630 | Iran | Kurds | 600 | 10600 | 10601, 10602 |
| 775 | Myanmar | Karen | 535 | 12300 | 15600, 15601 |
| 775 | Myanmar | Mon (Talaing) | 760 | 12600 | 12601 |
| 775 | Myanmar | Kachins | 507 | 13400 | 13401 |
| 750 | India | Nagas | 795 | 15400 | 15401 |
| 645 | Iraq | Iraq Arabs | 475 | 16201 | 16203 |
| 660 | Lebanon | Lebanon Arabs | 620 | 16300 | 16301 |
| 475 | Nigeria | Ibo | 459 | 20000 | 20700 |
| 840 | Philippines | Moro | 768 | 21200 | 21201 |
| 500 | Uganda | Acholi | 6 | 21801 | 21805 |
| 530 | Ethiopia | Somalis | 1019 | 23300 | 23301 |
| 530 | Ethiopia | Danakil | 324 | 26900 | 26901 |
| 436 | Niger | Tuaregs | 1136 | 28000 | 34500 |
| 373 | Azerbaijan | Armenians | 70 | 29500 | 29501 |
| 372 | Georgia | Ossetes | 849 | 30000 | 30001 |

Some conflicts had more than one participating ethnic group. They were aggregated into "coalitions." All coalitions are unique (that is, at least one element in the coalition is different from other constellations of ethnic groups in other coalitions). Original COWGREGids of the participating groups with the new "coalition" IDs:

Table 18.    Aggregated GREG Groups

| cowcode | statename | group | GREGid | COW_GREGid | Warid | Coalition ID |
|---|---|---|---|---|---|---|
| 145 | Bolivia | Aymara | 86 | 1450086 | 10101 | 1452001 |
| 145 | Bolivia | Quechua | 926 | 1450926 | 10101 | |
| 625 | Sudan | Azande | 87 | 6250087 | 18500 | 6252002 |
| 625 | Sudan | Bari | 144 | 6250144 | 18500 | |
| 625 | Sudan | Lotuko | 640 | 6250640 | 18500 | |
| 625 | Sudan | Bagirmi | 98 | 6250098 | 21302 | 6252003 |
| 625 | Sudan | Banda | 129 | 6250129 | 21302 | |
| 625 | Sudan | Berta | 173 | 6250173 | 21302 | |
| 625 | Sudan | Dinka | 332 | 6250332 | 21302 | |
| 625 | Sudan | Koma | 574 | 6250574 | 21302 | |
| 625 | Sudan | Murle | 789 | 6250789 | 21302 | |
| 625 | Sudan | Northern Lwo | 825 | 6250825 | 21302 | |
| 625 | Sudan | Nubians | 828 | 6250828 | 21302 | |
| 625 | Sudan | Nuer | 829 | 6250829 | 21302 | |
| 625 | Sudan | Teso | 1082 | 6251082 | 21302 | |
| 625 | Sudan | For | 1260 | 6251260 | 21302 | |
| 483 | Chad | Arabs | 999 | 4830999 | 19104 | 4832005 |
| 483 | Chad | Arabs | 1028 | 4831028 | 19104 | |
| 483 | Chad | Tama | 1054 | 4831054 | 19104 | |
| 552 | Zimbabwe | Mashona | 719 | 5520719 | 22200 | 5522006 |
| 552 | Zimbabwe | Matebele | 723 | 5520723 | 22200 | |
| 552 | Zimbabwe | Tonga | 1114 | 5521114 | 22200 | |
| 540 | Angola | Lunda-Chokwe | 122 | 5400122 | 23100 | 5402007 |
| 540 | Angola | Ovimbundu-Ovambo | 852 | 5400852 | 23100 | |
| 540 | Angola | Ovimbundu-Ovambo | 853 | 5400853 | 23100 | |
| 540 | Angola | Lunda-Chokwe | 1180 | 5401180 | 23100 | |
| 700 | Afghanistan | Hazara-Berberi | 434 | 7000434 | 23702 | 7002009 |
| 700 | Afghanistan | Hazara-Deh-i-Zainat | 435 | 7000435 | 23702 | |
| 700 | Afghanistan | Tajiks | 1051 | 7001051 | 23702 | |
| 700 | Afghanistan | Uzbeks | 1170 | 7001170 | 23702 | |
| 450 | Liberia | Gere | 396 | 4500396 | 24703 | 4502010 |
| 450 | Liberia | Gola | 404 | 4500404 | 24703 | |
| 450 | Liberia | Kpelle | 583 | 4500583 | 24703 | |

| cowcode | statename | group | GREGid | COW_GREGid | Warid | Coalition ID |
|---|---|---|---|---|---|---|
| 450 | Liberia | Loma | 639 | 4500639 | 24703 | |
| 450 | Liberia | Mandingo | 689 | 4500689 | 24703 | |
| 560 | South Africa | Xosa | 1222 | 5601222 | 25100 | 5602011 |
| 560 | South Africa | Zulus | 1248 | 5601248 | 25100 | |
| 432 | Mali | Tuaregs | 1136 | 4321136 | 27900 | 4322012 |
| 432 | Mali | West Sahara Arabs | 1218 | 4321218 | 27900 | |
| 437 | Cote d'Ivoire | Kulango | 594 | 4370594 | 32800 | 4372013 |
| 437 | Cote d'Ivoire | Lobi | 636 | 4370636 | 32800 | |
| 437 | Cote d'Ivoire | Mandingo | 689 | 4370689 | 32800 | |
| 437 | Cote d'Ivoire | Senufo | 979 | 4370979 | 32800 | |

## APPENDIX C. THE CODEBOOK FOR VARIABLES USED IN THE STATISTICAL ANALYSIS

Table 19.     Coding of Statistical Variables

| Variable | Explanation |
| --- | --- |
| intensity | Total number of recorded battle deaths divided by duration of the conflict in days |
| geoeprea2 | Areal concentration measured using GeoEPR geospatial dataset. Expected effect on intensity—negative |
| geoeprep2 | Population concentration measured using GeoEPR geospatial dataset. Expected effect on intensity—negative |
| geoeprpracohab | Proportion of cohabited area measured using GeoEPR geospatial dataset. Expected effect on intensity—positive |
| geoeprprpcohab | Proportion of cohabited population measured using GeoEPR geospatial dataset. Expected effect on intensity—positive |
| gregea2 | Areal concentration measured using GREG geospatial dataset. Expected effect on intensity—negative |
| gregep2 | Population concentration measured using GREG geospatial dataset. Expected effect on intensity—negative |
| gregpracohab | Proportion of cohabited area measured using GREG geospatial dataset. Expected effect on intensity—positive |
| gregprpcohab | Proportion of cohabited population measured using GREG geospatial dataset. Expected effect on intensity—positive |
| cw | Cold war conflict dummy, controls for availability of external support* |
| democ | Dummy for democratic versus nondemocratic regimes* |
| intervention | Dummy of external intervention into conflict* |
| lngdp | GDP per capita, as the most common proxy for general state strength. Measured prior to conflict, adjusted for purchasing power and inflation, and logged* |
| milqual | Military quality (military expenditures divided by number of military personnel, lagged by one year). Proxy for state military capacity* |
| mountain | The percentage of mountainous territory of the country. Proxies the |

| Variable | Explanation |
| --- | --- |
|  | impact of rough terrain on conflict intensity* |
| size | The percent of the ethnic group's population in host country** |
| statuscode | The political status of an ethnic group in the society. The coding that was used to transform the original EPR definition into numeric format is explained below** |
| settletype | Type of settlement for the ethnic group*** |
| incomp | Type of incompatibility between the conflicting parties**** |

*Variable from Lacina's dataset.[269]

** Variable from the EPR dataset.[270]

*** Variable from the GeoEPR dataset.[271]

****Variable from the PRIO dataset.[272]

Table 20.    Coding of the Statuscode Variable

| Initial Status designation in EPR | Value | Explanation |
| --- | --- | --- |
| DISCRIMINATED | 1 | discriminated against |
| POWERLESS | 2 | doesn't have rights |
| SEPARATIST AUTONOMY | 3 | have rights but limited participation in the state |
| REGIONAL AUTONOMY | 4 | have more rights than 3 |
| JUNIOR PARTNER | 5 | have more rights than 4 |
| SENIOR PARTNER | 6 | have more rights than 5 |

[269]Lacina, *Explaining the Severity of Civil Wars*, 285.

[270] Wimmer, Cederman and Min, *Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set*, 316; Cederman, Wimmer and Min, *Why do Ethnic Groups Rebel? New Data and Analysis*, 87; Lars-Erik Cederman; Brian Min; Andreas Wimmer, *Ethnic Power Relations dataset*, accessed October 22, 2010, http://hdl.handle.net/1902.1/11796.

[271] J. Wucherpfennig, N. B. Weidmann, L. Girardin, L.-E. Cederman and A Wimmer,"Politically Relevant Ethnic Groups across Space and Time: Introducing the GeoEPR Dataset," *Journal of Conflict Management and Peace Science*, forthcoming; Julian Wucherpfennig, Nils B. Weidmann, Lars-Erik Cederman, Luc Girardin, Philippe Duhart, Gustav Brown, James Flora, Andreas Wimmer, *GeoEPR dataset*, accessed October 22, 2010, http://hdl.handle.net/1902.1/14206.

[272] Lacina and Gleditsch, *Monitoring Trends in Global Combat: A New Dataset of Battle Deaths*, 145; http://www.prio.no/CSCW/Datasets/Armed-Conflict/Battle-Deaths/ (accessed October 22, 2010).

# APPENDIX D. STATISTICAL TESTS OF THE LACINA'S AND EPR DATA

Table 21.    The Statistical Model that Includes Only the Lacina's Variables

| Source | SS | df | MS | Number of obs | = | 53 |
|--------|-----|-----|-----|--------------|---|-----|
| | | | | F( 5, 47) | = | 2.08 |
| Model | 2499.04801 | 5 | 499.809601 | Prob > F | = | 0.0843 |
| Residual | 11280.0943 | 47 | 240.002006 | R-squared | = | 0.1814 |
| Total | 13779.1423 | 52 | 264.983506 | Adj R-squared | = | 0.0943 |
| | | | | Root MSE | = | 15.492 |

| intensity | Coef. | Std. Err. | t | P>t | [95% Conf.Interval] | |
|-----------|-------|-----------|-----|-------|-----------|-----------|
| cw | 1.238983 | 5.094455 | 0.24 | 0.809 | -9.009738 | 11.4877 |
| democ | -13.82848 | 5.413934 | -2.55 | 0.014 | -24.71991 | -2.937047 |
| lngdp | -1.335002 | 1.049895 | -1.27 | 0.210 | -3.447117 | .7771137 |
| milqual | -.0001707 | .0002761 | -0.62 | 0.539 | -.000726 | .0003847 |
| mountain | .0196116 | .0885944 | 0.22 | 0.826 | -.1586174 | .1978406 |
| _cons | 25.80921 | 7.351379 | 3.51 | 0.001 | 11.02015 | 40.59828 |

Table 22.    The Statistical Test of EPR and PRIO Variables

| Source | SS | df | MS | Number of obs | = | 102 |
|--------|-----|-----|-----|-----------|---|-----|
|        |    |    |    | F( 4, 97) | = | 1.87 |
| Model | 1711.46412 | 4 | 427.8660`29 | Prob > F | = | 0.1222 |
| Residual | 22214.5791 | 97 | 229.01628 | R-squared | = | 0.0715 |
| Total | 23926.0432 | 101 | 236.891517 | Adj R-squared | = | 0.0332 |
|        |    |    |    | Root MSE | = | 15.133 |

| intensity | Coef. | Std. Err. | t | P>t | [95% Conf.Interval] | |
|-----------|-------|-----------|---|-----|---------------------|---|
| size | 2.435452 | 8.116947 | 0.30 | 0.765 | -13.67444 | 18.54534 |
| statuscode | 1.837817 | .9495609 | 1.94 | 0.056 | -.0467985 | 3.722433 |
| settletype | 1.455675 | 1.234227 | 1.18 | 0.241 | -.9939239 | 3.905273 |
| incomp | 3.826984 | 3.721995 | 1.03 | 0.306 | -3.560147 | 11.21411 |
| _cons | -2.952264 | 6.094652 | -0.48 | 0.629 | -15.04846 | 9.143934 |

Table 23.    The Statistical Test of Entire Available Set of Variables Excluding the Settlement
Patterns Data

| Source | SS | df | MS | Number of obs | = | 53 |
|--------|-----|-----|-----|--------------|---|-----|
| | | | | F( 9, 43) | = | 2.61 |
| Model | 4863.63483 | 9 | 540.40387 | Prob > F | = | 0.0170 |
| Residual | 8915.50748 | 43 | 207.337383 | R-squared | = | 0.3530 |
| Total | 13779.1423 | 52 | 264.983506 | Adj R-squared | = | 0.2175 |
| | | | | Root MSE | = | 14.399 |

| intensity | Coef. | Std. Err. | t | P>t | [95% Conf.Interval] | |
|-----------|-------|-----------|---|-----|---------------------|---|
| statuscode | 4.532419 | 1.42758 | 3.17 | 0.003 | 1.65343 | 7.411408 |
| settletype | -.8967446 | 1.581276 | -0.57 | 0.574 | -4.085692 | 2.292203 |
| size | 2.320434 | 10.84224 | 0.21 | 0.832 | -19.54503 | 24.1859 |
| incomp | -1.258838 | 5.874823 | -0.21 | 0.831 | -13.10655 | 10.58887 |
| cw | 3.843381 | 4.933777 | 0.78 | 0.440 | -6.106528 | 13.79329 |
| democ | -15.82677 | 5.691714 | -2.78 | 0.008 | -27.30521 | -4.348336 |
| lngdp | -1.489609 | 1.022637 | -1.46 | 0.152 | -3.551952 | .5727347 |
| milqual | -.0002118 | .0002673 | -0.79 | 0.432 | -.0007509 | .0003273 |
| mountain | .0357173 | .0851297 | 0.42 | 0.677 | -.1359631 | .2073977 |
| _cons | 17.61467 | 11.59822 | 1.52 | 0.136 | -5.775362 | 41.0047 |

Table 24.    The Short Model that Includes Only Statistically Significant Variables

| Source | SS | df | MS | Number of obs | = | 53 |
|--------|-----|-----|-----|--------------|---|-----|
| | | | | F( 2, 50) | = | 9.39 |
| Model | 3760.93784 | 2 | 1880.46892 | Prob > F | = | 0.0003 |
| Residual | 10018.2045 | 50 | 200.364089 | R-squared | = | 0.2729 |
| Total | 13779.1423 | 52 | 264.983506 | Adj R-squared | = | 0.2439 |
| | | | | Root MSE | = | 14.155 |

| intensity | Coef. | Std. Err. | t | P>t | [95% Conf. Interval] | |
|-----------|-------|-----------|---|-----|----------------------|---|
| statuscode | 4.129866 | 1.32359 | 3.12 | 0.003 | 1.471356 | 6.788376 |
| democ | -15.1885 | 4.800793 | -3.16 | 0.003 | -24.83117 | -5.545821 |
| _cons | 7.900676 | 3.808451 | 2.07 | 0.043 | .2511774 | 15.55018 |

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